

Daniel Turner
of the College of Physicians LONDON.



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A DISCOURSE CONCERNING FEVERS.

IN

TWO LETTERS

To a Young PHYSICIAN.

THE FIRST,

Diſſuading from all *Hypotheſes* and *Theories*, whether *Phyſical* or *Mechanical*, as vain and deluſive.

THE SECOND,

Directing his *Regimen* for the Cure, and his Conduct to the ſick Perſon;

With ſome ſhort, but general Remarks upon the *Pulſe* and *Urine*, in the Way of Poſtſcript. As alſo upon the *Criſes*, and *critical Days* in *Fevers*.

The THIRD EDITION, revis'd and improv'd.

By DANIEL TURNER, M.D. of the College of Phyſicians in *London*.

Neque enim erubeſcendum eſt, ſi haud ſemper liceat, qua ratione, Morbos aut gignat aut abigat Natura, ſuſpicari: Saltem honeſtius eſt nos aliquid neſcire nos confiteri, quam tandem in opiniones falſas atque vanas convictos, turpiter erubeſcere.

Freind's *Com. de Febribus.*

LONDON:

Printed for JOHN CLARKE, under the *Royal-Exchange*.

M,DCC,XXXIX.

TO THE READER.

THO' a Preface to an Epiſtle may be thought irregular, yet ſomewhat that occurr'd ſoon after the Publication of the firſt Edition of this Diſcourſe, will make it the more excuſable, if not neceſſary.

In the Advertiſement to the firſt Impreſſion, the Reader was inform'd how theſe Letters came to be made publick, viz. *to prevent a faulty Tranſcript coming forth unknown to the Author, who has been ſince appriſed of a poor Snarler that would fain have got ſome Sheets into the Preſs, if any one would have undertaken them, by way of Anſwer. The Tendency whereof I have been inform'd by one who had a Sight of the Manuſcript, was, to prove the Author inconſiſtent with himſelf, as decrying the Service of* Mathematicks *and* Mechanicks *in the Cure of Diſeaſes, whilſt eulogiſing ſome Improve-*

ments made thereby, and citing ſeveral Writers that have excell'd therein.

But this Objection ſurely muſt be made from a great deal of Ignorance, or as much of ill Nature, becauſe the Deſign of the Author [very manifeſt through the Tenure of both Letters] was to caution a young Phyſician in his attending upon Fevers more eſpecially, how he founded any curative Intentions upon Theories *or* Hypotheſes *thence borrowed, or undertook to explicate their* Phænomena *by any ſuch; for that it might ſo happen when he had this way harangu'd moſt learnedly, and given many Proofs of his ſcholaſtick Acquirements; when he had, I ſay,* more Mathematico, *laid down his* Poſtulates, *his* Axioms *and* Theorems, *making all out in his own way, there might not be one Word of Truth or Fact, could we be led into Nature's Secrets, or her inſcrutable Proceſs during the febrile Conflict. So that if for this Cauſe he has adviſ'd his Friend, in his Conduct at theſe Times, to be more diligent in obſerving her Motions, and rightly diſtinguiſhing ſuch* Characteriſticks *only, as may enable him to make the ſurer and ſounder Judgment of the proper Genius of the Fever, than in*

building

building romantick Theories, *or laying Superſtructures upon diſputable* Theſes, *however he may offend the Compilers of ſome ſuch, he cannot imagine that any prudent Practitioner, who has the Good of his Fellow-Citizens in view, will be diſpleas'd at his ſo doing.*

Whoever will take the Pains to look over a late Performance of this kind, which has an equal Claim to a Diſcourſe of Phantoms, *with one of* Fevers, *will ſoon ſee how far ſhort it comes of anſwering its Title, viz.* A Practical Diſcourſe upon the preſent Epidemic Fever, *or how the Cure thereof is to be further'd by any thing laid down therein.*

So fond indeed are ſome Gentlemen of their Talents this way, that the moſt abſtruſe or intricate of Nature's Motions, cannot eſcape their Explanations, who rather than be thought ignorant of any thing that paſſes at theſe times in the human Fabrick, either in reſpect to the ſolid or the fluid Parts thereof, will be attempting ſome way or other [*no matter whether true or falſe*] *to ſolve the ſame: and it is ſurely againſt ſuch* Theoriſts, *ſuch* Hypothetical Schematiſts *(who forſaking Nature and her Dictates, are buſying themſelves conſtant-*

ly with their Machinery, *their* Chymical Analyſes, *and* chimerical Principles, *applying them to certain States and Conditions of a feveriſh Blood, whoſe Cauſes are I might ſay inveſtigable many of them, and will be ever ſo to the human Underſtanding) that every true practical Phyſician ought to be guarded. For as well may the Taylor take Meaſure of a* Spectre, *in order to fit the ſame with a Suit of Apparel, as the* Mathematician *or the* Mechanician *find out any* Theory, *or invent any* Hypotheſis, *which will conſtantly hold good in the ſeveral Species of Fevers, or afford any ſolid Inſtruction to the Artiſt, how to cure the ſame. Of the two, it may ſo happen, that the Patient may ſuffer leſs under mere* Empery, *than by one that is bigotted to ſome ſpecious* Hypotheſis.

The Charge brought againſt the ſecond Letter, is this, that the Author has given his young Phyſician to underſtand there is nothing elſe requir'd of him, in his Attendance upon Fevers, than to preſcribe Pulv. e Chel. Canc. C. Conſ. Lujul. *or the* Lapis contrayer. *an Allegation ſo falſe, as will appear to every Reader thereof, that nothing but the moſt impotent Malice could have furniſh'd.*

It is allow'd, theſe Remedies are adviſed to be preſcribed at ſome times, rather than others more uncertain, whereby he may reap the Satisfaction of doing the leaſt Harm [and I am ſure he is a happy Man that never did any in Fevers] till Nature by ſome better Diagnoſtick *than he has yet gained, lets him into a farther Knowledge what muſt be done. For although the more antient and better experienced, are allowed at ſome times to make what they call a Puſh for Life, yet it is not for the* Tyro, *notwithſtanding all his* Academical Acquirements, *to throw the Die whether he ſhall kill or cure. The conſiderate Mechanick will draw the Wedge where he perceives it goes not right, and try another better ſuited; whilſt the bold and ignorant drives on, let it rive and tear as it will, rather than have it thought he was out in his Calculation either of the Force apply'd, or the oppoſite Reſiſtance. The Simile is courſe, but the Application eaſy. In ſhort, as it will appear from the Diſcourſe itſelf, that theſe Charges againſt the ſame are falſe and malicious, ſo if it conduce to make his young Gentleman an honeſt, ſafe and practical Phyſician,*

more particularly in the Cure of Fevers, 'tis what the Author aims at, who remits him elsewhere for the Art of Prattling, *laying down* Poſtulates, *and ſolving* Problems. *Of which, in a practical Diſquiſition concerning the ſame, he believes there is little Uſe.*

I might obſerve, what I have heard farther objected, that the firſt Letter is moſt of it Quotation: and this the Author readily allows; for his Deſign as above, being principally to diſſuade the young Student from falling in with Theories, *or building upon* phantaſtick Schemes, *in the Cure of Fevers, or attempting* mechanick Explanations *in Things doubtful and diſputable, by which he might expoſe himſelf to the grave and judicious, he believ'd he could not do this with more likelihood of Succeſs, than by expoſing ſeveral ſuch, and ſhewing their Uncertainty, their Danger and their Inſufficiency for eſtabliſhing a ſound or rational Practice in theſe Diſeaſes: and if he found the greateſt Maſters in this Way, diſagreeing among themſelves about ſeveral phyſical* Axioms; *ſome of them very candidly acknowledging, that through the want of* Data, Mathematicks *and* Medicine *muſt be often incompatible: when finding*

others

others in their mechanick Solutions *of ſeveral* Phænomena, *as well in regard to the Cauſe of the Diſeaſe, as the Cure thereof, very diſcordant one from the other, each running a wild Gooſe's Chace in his own Way, and leaving the Caſe in itſelf as unintelligible as before. He might be the more eaſily brought off from this learned way of triſling, and invited to purſue, as he is adviſed, a ſteady Obſervation of Nature only, in her Efforts at theſe Times, to throw off her Enemy, and free her ſelf from her Burthen: taking curative Indications from the Symptoms themſelves, as they ſeverally preſent, and not from Whimſies, which poſſibly have no Foundation but in the Brains of their Founders; marking conſtantly the Iſſue or Succeſs attending, till he has made himſelf acquainted ſo far as he can, what kind of Fever he has to deal with, and the Method, which, by conſtant Experience, he perceives beſt ſuited to ſubdue the ſame. For as our* Sydenham *(whom you will find very often quoted in the following Pages) has juſtly obſerv'd in the Preface to his Works.* 'As it often happens 'that the Face of the Diſeaſe varies according 'to the various Proceſſes of healing, ſo ſome

'Sym-

'*Symptoms will rather proceed from the* Phy-
'ſician *than from the* Diſeaſe *itſelf, when*
'*under Nature's Guidance: ſince we find the*
'*ſame Diſtemper differently managed, will have*
'*different Appearances, inſomuch that unleſs*
'*great Caution be uſed, our Judgment about*
'*ſome* Symptoms *will be very uncertain.*'

I have nothing farther to acquaint the Reader, unleſs I add, that at the Requeſt of my Bookſeller, he is now given to underſtand the Author is

His Friend, and

Devonſhire-Square,
Aug. 18, 1732.

Humble Servant,

DANIEL TURNER.

ADVER-

ADVERTISEMENT.

THE following Letters, firſt written to a young Phyſician, who had deſir'd the Author's thoughts about this Subject of *Fevers*, together with thoſe of ſome modern Writers, drawn up in ſuch manner, as might be proper for his own Information, falling into a third hand, a haſty Tranſcript was made thereof, with deſign of conveying the ſame to the Preſs: of which being inform'd, to prevent a maimed Copy coming out, he promis'd to reviſe them at his leiſure, and having made ſuch addition and alteration as might render them more uſeful, conſent alſo (if thought neceſſary) to their publication.

If any Gentleman ſhould think himſelf wrong'd, in that his opinion is expos'd, it muſt be without cauſe; ſince the Author has avoided medling with any one's private Sentiments, and brought nothing upon the Stage, that has not been openly avow'd, or divulg'd in print. It is ſurely every Man's duty to ſtand on the ſide of Truth, at leaſt what he thinks ſuch, (*Amicus Socrates, Amicus Plato, &c.*) as well as to caution againſt Error, eſpecially where Life may be thereby endanger'd; and provided this is done without perſonal Reflection, no Man can juſtly or reaſonably complain.

As it was another part of his Deſign, to inform this young Gentleman's Mind, as to his moral Converſation; ſo if in expoſing the Immoralities of others, who are ſtill nameleſs, the better to draw him off from ill Examples, the Perſons reflected on, ſhould think themſelves ill treated, this alſo would be

be as groundleſs, becauſe he points out no particular Perſon; but if thoſe who are really meant, make no ſcruple thus to publiſh their ſhame, why ſhould they think it ſtrange that ſome others ſhould obſerve them, and reſent ſuch unſeemly behaviour in a ſick Man's Chamber, of which no one can be guilty, who has not ſurely firſt ſhook hands with his *Reaſon*, how wiſe ſoever he may ſeem in his own Conceit, as well as his *Religion*, if ever he had any.

It may be farther neceſſary, he ſhould make Apology for ſo rigidly oppoſing the Method of late introduced, of Practice by *mechanic Theorems*, or taking phyſical Indications thence; as if a Man could not be an able *Phyſician*, unleſs firſt an *Algebraiſt*, and capable of reducing *phyſical Quantities* and *Numbers* in the Body of Man, to a *mathematical* Standard: Indeed the many foul and fatal Errors he has ſeen committed, particularly in the buſineſs of *Evacuations*, more eſpecially about the Problem of *diminiſhing one Secretion by the increaſe of another*, and *vice verſa*, by ſome too opinionated Men in this way, has made him more wary of purſuing this Courſe farther than Obſervation in the like Caſes, or a well-grounded Experience, will juſtify the ſame; and he hopes the pardon of theſe Gentlemen of this *exalted Genius*, if he is ſo unhappy to differ from them, in believing that theſe two will be always the ſafeſt Guides to the practical Phyſician.

THE

THE FIRST LETTER TO A YOUNG PHYSICIAN,

Diſſuading Him from all *Hypotheſes* and *Theories*, either *Phyſical* or *Mechanical*, as vain and deluſive.

SIR,

IT may perhaps ſeem ſtrange to ſome, if not to you, that any Perſon's Thoughts, and much leſs mine, ſhould be ſtill wanting, or thought neceſſary upon a Diſeaſe ſo raging for thouſands of Years paſt, and after ſo many abler Pens employed thereon; a Diſeaſe which Dr. *Sydenham* * tells us, takes up at leaſt two thirds of the whole Tribe, and often carries away more People

* In his Epiſtle to Dr. *Cole*.

than

than all the reſt. A Diſeaſe ſo common and withal ſo fatal in the Days of *Hippocrates*, that out of forty two he gives us an account of, he had the Misfortune of loſing twenty five *; and yet, as you have ſometimes juſtly remark'd in private Converſation, whoever looks over the large number of Volumes written upon this Subject, might be induced to believe that the Authors had thought very little more than to dreſs up an *Hypotheſis*, or furniſh out ſome *Theory*: eſpecially our late ones, not dictated ſo much by *Nature* as their own Fancies. How elſe, ſurely, is it come to paſs, that whilſt ſhe is ſtill the ſame in all Countries and Climates, and has been, if not before, at leaſt from the beginning of the *Poſt-diluvian* World; yet with reſpect to our Writers in *Phyſick*, particularly about *Fevers*, we have almoſt as many Minds as Men, as well in regard to the *Cauſe*, as the *Cure*, thereof.

It has been ſaid by ſome, there is leſs Wonder we have made ſo ſmall Improvement in the Knowledge both of this and

* As Dr. *Freind* has obſerv'd in his *Com. de Feb.*

others,

others, ſince we forſook our antient Guides, and ſet up for new Diſcoveries, and *hypothetical* Advances: Among whom I find it the complaint of *Rhaſes* the *Arabian*, as a late Writer † takes notice, thus,

'The Authors who have improv'd this Art, 'are not a few, nor to be comprehended 'within the compaſs of a few Years: A 'thouſand Writers, perhaps for a thouſand 'Years, have been improving the ſame; and 'he that induſtriouſly ſtudies thoſe Authors, 'will, in the ſhort period of Life, find out as 'much as if he had lived a thouſand Years 'himſelf, or employed thoſe thouſand Years 'in the ſame Study of Phyſick: But if the 'peruſal of antient Authors comes once to be 'ſlighted, what can any ſingle Perſon find 'out? or what proportion can his perſonal 'Abilities, tho' much ſuperior to others, bear 'to the immenſe Treaſure of the Antients? 'In ſhort, he that reads not the Books of the 'antient Phyſicians, nor underſtands ſome-'thing of the nature of Diſeaſes, even before 'he comes to viſit, will, when he attends the

† *Freind* in his Hiſtory of Phyſick, Vol. II.

'ſick,

'sick, either through Ignorance or Miſtake, 'overlook the Diſeaſe, becauſe he does not 'beforehand underſtand any thing of it.'

In the latter part of our Author's Aſſertion, he is ſurely right; but the Query now will be, whether this Diſeaſe is ſo well underſtood, by reading either the antient or modern Authors, as from our daily converſation with the Sick, and heedfully obſerving how Nature works her own deliverance, when left to her ſelf at any time under like condition? from whence we may be after, the better enabled to aſſiſt her by the means of Art. *Hippocrates* (as the fame *Sydenham* has remark'd) * lay'd down this as his principal Axiom, *Natura curat Acutos*, and he delivers plainly their *Phænomena*, without reſpect to any *Hypotheſis*, ſtrictly regarding the Method ſhe uſes as well in the generating as in ſubduing thoſe Diſeaſes. In this only conſiſts the Theory of this *divine-Sage*, as appears by his *Prænotiones*, his *Aphoriſmata*, and the like; not taken from the Dreams of a precarious *Hypotheſis*, but from an Obſervation meerly

* In the Preface to his Diſcourſe of *Fevers*.

of this natural Proceſs, or the conſideration of *Nature* in the Production of theſe Diſorders in the human Frame, and ſeeing his *Theory* was no more than an exquiſite Deſcription of the ſame *Nature*, it was reaſonable that in Practice his only aim ſhould be to relieve her when ſhe was oppreſs'd, by the beſt means he could: allowing no other Province for *Art*, than the ſuccouring of her when ſhe was weak, reſtraining her when outragious, and reducing her to order in that way and manner which is agreeable to her, and whereby ſhe herſelf endeavours to expell them: for the ſagacious Man knew right well that *Nature* beſt judges Diſeaſes, and conquers them alſo frequently when aſſiſted with a few ſimple Remedies.

But (which is our great Misfortune) we long ago forſook this antient Guide, and his Method of healing founded upon the Knowledge of *conjunct Cauſes*, which may be known, and from whence only our curative Indications may be taken, puzzling our Heads in the mean time about ſuch as are remote, and truly inſcrutable. So that the Art which we now exerciſe, contriv'd by Men given to quaint

Words, is rather the Art of prating than of healing.

Of the ſame Mind ſurely was his Countryman *Avenzoar*, who tells us, † 'that albeit 'he had a liberal Education, That he had 'learn'd not only what belong'd to a Phyſi-'cian, but out of a great deſire of Know-'ledge, every thing that was related either 'to *Pharmacy* or *Surgery*; notwithſtanding 'which he lays it down as a Maxim, that '*Experience* is the right Guide and Standard 'of a warrantable Practice, and muſt abſolve 'or condemn us in this Life and the next: 'Obſerving farther, that the Art of curing is 'ſo little to be obtain'd by *logical* Diſtinctions, 'or *ſophiſtical* Subtilties, that long Uſe, aſſiſt-'ed by a good Judgment, can only furniſh 'this extraordinary Talent.'

Yet as on the one ſide we are told, our Neglect of the Antients, and Contempt of their Labours, has contributed to the ſmall Progreſs we have made in the healing Faculty: So on the other, we have been charged with Bigotry to their Opinions, and yielding a kind

† *Freind* in his Hiſtory of Phyſick, Vol. II.

of

of implicit Faith to their Traditions; whence farther Improvements have escaped us, and new Discoveries have been prevented, for fear of clashing with the Antients.

Thus it seems, between the too great Neglect, and over-bearing Fondness of Antiquity, we stand culpable in the opinion of either Party: But indeed, when we consider the Method since the time almost of *Hippocrates*, in which more particularly the nature of *Fevers* has been handled, how little Profit is to be reaped by the young Practitioner from hence, I might say rather what Disadvantage, I need not, I am sure, acquaint you, who are already well apprised thereof; and whom I have heard lament with another of the same Profession *, that even among the multitude of Remedies, we had almost lost the Art of curing: Or that notwithstanding we abounded with *Systems*, *Practices*, *States*, and *Histories* of Physick, for the most part, set forth by those who have been little conversant in Practice, yet are we in a manner de-

* Editor meus Editionis Lommii in Fed. in ejusdem Præfatione.

ſtitute of the moſt uſeful, *viz.* the *Hiſtories of Diſeaſes*, like *Sydenham*'s copied after *Nature*, or impartial Regiſters of Practice laid down with ſuch juſt and adequate Rules, as are neceſſary for ſteering ſafely the *medical Compaſs*, diveſted of *Hypotheſis*, *Theory*, or *Speculation*.

For as that honeſt Man takes notice *, 'in writing an *Hiſtory of Fevers*, as of all 'other Diſeaſes, every *philoſophical Hypotheſis* that has inveigled the Writer's Head, 'ought firſt to be ſet aſide: that the clear 'and natural Phænomena, how ſmall ſoever, 'may be the more carefully remark'd. For 'it is ſcarce to be imagin'd how many Errors have been occaſioned by theſe Writers, 'who aſſign ſuch very commonly as are no 'where to be found but in their own Imaginations: or if it happen that any one falls 'in with their own Hypotheſis, this they 'will be ſure to magnify, neglecting in the 'mean time all others that make againſt 'them, or ſlightly paſſing by them, unleſs 'by ſome philoſophical Subtilty, they can 'force the ſame to make it ſerve a turn.'

* In his Preface to his Diſcourſe of *Fevers*.

We

We have one *Freind*, 'tis true, among a whole *College* of *Phyſicians*, who has taken much Pains this way, and to whom we are therefore as much indebted; but what is this among the great number of learned Men, who are truly qualified farther to improve this Art by their Obſervations, yet chooſe to remain ſilent? What the *Bard* * has done being confeſſedly rather for the uſe of the Ladies in the Country, than the Practitioner here in Town: And truly had the venerable Gentleman ſaved himſelf the Pains of his late Performances, it had been poſſibly more for his Reputation: Since every one knows, whilſt another turn was to be ſerved, there was no Man ran farther upon the Pomp of Medicine, or made it more a Myſtery than himſelf: And that end being anſwered, to expoſe the ſame now at laſt to the common People, what is this but like another *C——r*, *S——n*, or *Q——cy*, to ſet up a Phyſician in every Family, or to make every one his own? by which more People have been ruined and undone, through Miſtake in the caſe, an ill-timed Adminiſtration of a good Medicine, or

* Sir *R——d B——r*.

ſome other Over-ſight, than would by all their Diſeaſes, had they been left only to Nature.

But to inſtance now in ſome of theſe *hypothetical* Writers, I will begin with a certain *Phyſick Profeſſor* * well known to us both, who has in a manner diſcharged the laſt Stages of the Blood, of any thing inimical to our Bodies, and diveſted the ſame, together with the Juices thence ſecreted, excepting the *bilious*, of any noxious Qualities; whilſt the Seat of the Diſeaſe, whether *acute* or *chronical*, is placed in the *Alimental Ductus*, or the *Primæ Viæ*, by which are underſtood the Stomach and Guts; whence other Remedies, how potent ſoever, and which have been found uſeful to ſubjugate the ſame, are hereby in a manner caſhier'd; and ſuch only as operate on theſe firſt Paſſages, that is *Vomits* and *Purges*, are entertained: to prepare the way for this very ſingular *Regimen* you have heard farther that *Oils* are to be adminiſtred, with a view of ſheathing the Parts from the Depredations of theſe *bilious Salts*, as well as fitting them for expulſion by the ἄνω καὶ κάτω *Catharſis*.

* Dr. *W*——*d* in his State of Phyſick and Diſeaſes.

Thus

Thus has this learned Gentleman and great *Naturaliſt* prevailed with many, even of the Female Sex, to run this *vomiting*, *clyſtering* and *purging Gantlet* daily, or each other day, for ſix weeks or two months ſucceſſively, to get rid of a ſuppoſed *Aq. Fortis* in their Stomachs, giving riſe to ſome Complaint, how diſtant ſoever from the ſame. A *Vomit* over night, a *Purge* next morning, with an *oily Clyſter* three or four hours after. Next day an *oily Draught*, or a *Vomit*. The day following a *Purge* and an *oily Clyſter*; and ſo *de die in diem*, till the ſick Man grows tired, or being quite ſpent, is forced to give over.

And this Method I have heard alſo has been purſued, without regard to the already over relaxed Fibres of the *Ventricle* and *Inteſtines*, the ſlimy *Saburra* on the plushy Coat of the ſame, or phlegmatic Infarctions of their Glands; much better removed by *Vomits* (where ſuch are wanting) of another kind. The *Idioſyncraſia*, *Nauſea*, *Anorexy*, *Dyſpepſy* or *Apepſy*, after once emptying the ſame Paſſages, requiring a different Management, as by the *Amaro-aromatica*, *chalybeata* & *corroborantia*: But ſuch is the Perſuaſion of the

Doctor, be the Symptoms whatever, the Source of the Diſeaſe is here, and accordingly down goes the *Oyl*, to blunt the offending *Salts*, then the *Vomit* to diſcharge them: But this not ſufficing, next day a *Purge*, and up muſt go the *Clyſter*, to fetch off what was got too far out of the reach of the preceding Vomit.

It were needleſs to give a Catalogue of Diſtempers that are thus to be vanquiſhed according to this Author, ſince all are concluded under the ſame; I need not re-mind you of a Perſon who told us he had taken ſeveral Quarts of *Oyl*, two Dozen of *Clyſters*, with a like number of *Purges*, in leſs than ſix Weeks time, to get rid of an *iſchiadic* Diſtemper, which ſtill continuing, was after removed by an *Epiſpaſtic* applied upon the pained place, without a Grain of Phyſick of any ſort; nor have I leiſure to acquaint you how vain and fruitleſs the ſame Courſe has been to many others whoſe Stomachs (ſome) have been thereby ſo nauſeated, that neither Phyſick nor Food, for a long time after, could be retained; the very Sight of the *Oyl* having ſet ſome tender Stomachs upon retching, as that of the *Clyſterpipe* has been ready to do

others, upon the double Operation; of which myſelf was once a Witneſs.

But it were ſurely paying too great regard to a whimſical Opinion, to enlarge further thereon; eſpecially ſince the ſame has been long ſince animadverted, in a Diſcourſe by way of * Anſwer to what the Doctor has made publick in relation thereto.

The next I ſhall obſerve under the ſame *Claſs*, ſhall be that of another very ſingular Man, † who at his firſt ſetting out was reſolved to be taken notice of, for Novelty likewiſe of Opinion; which was, that our Stomachs could never abound with too much *Acid*; and that the contrary Quality, *viz.* the *Alkaline*, was the Root of Diſeaſes, as well Fevers as others: Hence the *Orange* and *Vinegar* Merchants Intereſts were to be promoted: The *Spirit* of *Sulphur*, and *Vitriol*, the *Cream*, *Cryſtals*, and *Vitriolate Tartar*, were, like *Salt*, to ſeaſon all Things, and four *Pickles* the only Condiments to our Foods. Theſe were to take off the Effervеſcence of the

* 2——cy's Remarks upon *W*——*d*'s State of Phyſick.
† Dr, *C*——*ch*.

Blood

Blood in feverish Ebullitions thereof, to incide the viscuous Humour, drain away all tartarous scorbutick Salts by the Kidnies, fortify the Stomach, promote Digestion, brace up the relaxed Tone of the same part, excite Hunger; in a Word, to allay all preternatural Ferments, arising by means of *alkalious* Salts: So that in short I know no Man to whom the following Remark of Dr. *Freind* is more applicable than to this Author, who having observed the Mischief of a *hot Regimen* in Fevers, delivers himself thus, on the opposite Side: *Est & alia huic diversa Insania, quam insaniunt nonnulli quorum in Acidis, posita est omnis curatio. Quique spem nullam nisi in Aceto, aut pomorum agrestium succo collocant, quasi quia Metus sit ægrotum comburere, ideo protinus frigore enecare operteat* *.

Of a contrary Opinion to this, was one perhaps of as sour a Temper †, however a more fortunate Practitioner, the wealthy *Alkalinus*, who seem'd, upon a much more reasonable Foundation, to have taken up a

* Comment. de Feb.
† Dr. *R——si.*

quite

quite different Perſuaſion, *viz.* that an *Acid* was the chief Enemy to our *Engliſh* Conſtitutions, and woven, as it were, in a greater or leſs Degree with moſt of our Diſeaſes: Wherefore it was rare to find a Preſcript of this Gentleman's without one or more of the *Teſtacea* or abſorbent Powders, to conflict with this *Acidity*, if not in the Blood, in the Juices of the Stomach and Guts.

That ſuch an Humour does predominate in theſe Parts, even of Infants and young Children, we need ſurely no other proof than the curdled Milk thrown up in vomiting, or thoſe gripy Stools, as the good Women call them, ſo frequently enſuing; that an *acid* Efferveſcence is the cauſe alſo of the convulſive *Tormina* of theſe little ones, is as evident, from the ſame yielding to theſe *alkaline* Remedies, as to a Charm; that the like gives riſe to the Complaint at the Mouth of the Stomach, or upper part of the *Oeſophagus* by the *Greeks* named καρδιαλγία, alſo καρδιωγμὸς, by our People the *Heart-burn*, is as manifeſt from its removal the ſame way.

Again, that ſuch *Acid*, encountring with other Juices, keeps up a *Luctus* in the Blood

of

of *hectical*, and ſome of the *ſcorbutick* Patients, producing thoſe *colliquative* Sweats and Fluxes which often attend them, is farther apparent from ſo many of their Recoveries, when timely enterprized, by means of the *Aſs*'s Milk, and the plentiful uſe of the ſaid Powders. Laſtly, that this *Acid* is ſo fatal to others, appears alſo from the ſour Eructations, curdly Vomitings, and Gripes with Looſeneſs, when the *Milk Diet*, upon this Occaſion, is forced to be laid aſide, and the *Teſtacea* continued; altho' with ſome other Vehicle, ſuch as the temperating Decoctions of *China*, *Sarſa*, *Eryngo*, or the *Decoctum Album*.

No wonder then this very ſucceſsful Phyſician, having found by Experience that nothing came up to theſe, was ſo very fond of them, as to make them almoſt the whole of his *Materia Medica*; inſomuch that one of his Creatures, who had raiſed an Eſtate under him, has been often heard to ſay, that *Alkalinus*, to his Knowledge, had acquired above fifty Thouſand Pounds by the Powders of *Crabs Eyes*, *Pearl*, *Coral*, and the *Crabs Claws*.

I muſt own to you, my Friend, that taking

ing this Gentleman for a Guide at my firſt ſetting out, I had formerly free acceſs to his *File*, and have looked over many thouſands of his *Formulæ*, where, however Caſes might vary, the *Teſtacea* (as Dr. *Strother** ſays) ſeemed the *Sheet Anchor*, although directed in divers Forms, both in *acute* as well as *chronic* Sickneſſes. He dealt much indeed in *Mineral Waters*, ſometimes for *Vehicles*, to waſh the others down: But neither will I detain you longer with the Management of this great Practitioner, *great* indeed, on the account of a vaſt Eſtate he had acquir'd by a fortunate Practice; yet how far excelling others, in good Literature, good Breeding, or good Uſage of the reſt of the Faculty, or thoſe related to it, I ſhall not take upon me to determine; leaving that to others, who were better acquainted with him.

Whilſt quitting him, the next under the ſame Tribe, I mean the *hypothetical*, I ſhall obſerve, is one, who I fear did more Miſchief than any, if not all the other; I mean *Pyrophilus* or *Philopyrus* † who had taken up a

* Preface to Dr. *R——ſi*'s Diſpenſat.
† Dr. *M——a* in his *Pyretologia*.

Belief

Belief that there was a kind of *Venom* or poiſonous Ferment, which at theſe times had ſeized on the animal Spirits, and conſequently that the true and radical Cure of *Fevers*, conſiſted in the exhibiting ſuch *Antidotes*, as were fit to encounter and ſubdue the ſame: ſuch chiefly were the *Theriacal* Compoſitions, the Confect. of *Mithridate*, the *Elect. ex Ovo*, the *Rad. Serpentar. Contrayervæ*, and the like. Theſe, all under the Name of *Alexipharmicks*, were called in, unleſs the Diſeaſe began to remit, and then the ſole Antidote was the *Cortex*; as at once extinguiſhing the *Ferment*, and overcoming the Diſeaſe, if the Patient was not deſtroy'd by the ſame, or the Remedy.

You are to underſtand, Sir, by the way, that theſe *venene Ferments*, thus implicating themſelves with the animal Spirits (which our Author here diſplays, defines their Nature and Properties, as things ſelf-evident) and conſtituting the different Species of *Fevers*, differ only among themſelves in *Degrees* thereof. Thus if the *Venom* which has ſeiz'd them be of a mild Nature, and they in good Heart, or Condition, they may poſſibly get the Maſtery

ſtery in twenty four Hours, altho', perhaps, the ſame Ferment may muſter up freſh Force at certain ſtated Periods: Whence the Riſe of *Intermitting Fevers*.

From the next Degree thereof, taking hold of the ſaid Spirits, being now as it were broken, and more violently ſmitten, ſo that with their utmoſt Force and Endeavours, they are unable to contraſt therewith, or to gain a Victory in the Space of one Day, two or three, there is then form'd the *Synochus*, or Continual Fever.

Again, from a yet more intenſe Degree of this *poiſonous Ferment*, the Spirits leſs able to expand themſelves or diſengage therefrom, notwithſtanding their utmoſt Efforts and Labour, they now grow inraged and tumultuating, are, as I may ſay, hurried into a State of *Exploſion*, blowing up the whole Fabrick; ſometimes exciting enormous Vomitings, at others carrying all before them into the Cloſe-Stool; ſometimes breaking forth in Sallies both ways at once. Hence the *Inflammatory Fever*, or the *Colliquative*, together with the *Rhuematic*, univerſal or particular; the *Pluriſy*, *Peripneumony*, *Angina*, the *Scarlet*, *Variolous*,

riolous, *Morbillous*, the *Diarrhœa*, *Diſenteria*, *Choleria* and *Cholic* of the Stomach and Guts, according to the divers *Indoles* of the *Venom*, thus affecting the Spirits, with their concomitant Symptoms.

Laſtly, from the higheſt Degree of the *Contagious Miaſms*, ariſeth the *Malignant*, or σύνοχος, the extreme of which produceth the *Peſtilential* or the Plague itſelf; when the Spirits, by means thereof, are knocked down in the twinkling of an Eye, at the firſt onſet; and being *impares Congreſſui Venenato*, reſign their Arms, after they have received ſeveral Marks of their Enemies Weapons, as the *black* and *blue Spots*, *Carbuncles*, &c. But here you are to note, that as the *Benign* or *Mild* is ſometimes changed into the *Malignant*, ſo this laſt may tack about, recover new ſtrength, and turn to the *Benign* or *Mild* (the worſt of them in the Beginning taking the appearance of the *febris continens*) accordingly as the Spirits are prepared for Battle; for as I have already obſerv'd, where theſe are *ſtrong*, and the *Venom mild* in its Nature, the συνοχῆς is produc'd; but where that is *potent*, and theſe are *weak*, the σύνοχος, which always

partakes

partakes of *Malignity*, and before it can be ſubdued, its ſhape muſt be changed into that of the συνοχῆς *.

From this *Hypotheſis* of the *Venene Ferment* taking ſeiſure in this Manner upon the *Animal Spirits*, our Author deduces theſe two curative Indications, *viz.* the Extinction of the ſaid *Ferment*, and Relief of the Symptoms.

If the Fever be of the *malign* Kind, the Expanſion of the Spirits is to be promoted by *Alexipharmicks* and *Veſicatories*, the former more *mild*, if neither *Convulſion* nor *Coma* are preſent, and of the hotter Sort, if complicated therewith; but no Purgative is to be adminiſter'd till the Poiſon is entirely ſubdued, either by the *Bark* or the warmer *Antidotes*.

I have given you here, Sir, a Tranſlation in a Manner of *Pyrophilus*'s own Words †, by which you may ſee how this learned Phyſician, after the Example of his Predeceſſor Dr. *Willis*, is marſhalling his Army of Spirits, leading them on to encounter the Enemy, detaching ſome one way, whilſt others are order'd a quite contrary; ſome firing from one quarter,

* Elenchus Capitum Vol. I.
† See the Elenchus aforeſaid.

others vanquiſh'd and put to flight, that had been call'd to a different Poſt: So that if this be not building Caſtles in the Air, to be attacked by *Phantoms*, or laying a Superſtructure that has no Foundation, nothing can: The Difference indeed is wide in the Conſequence, in that, one may be demoliſh'd without Danger, but by the other, we are ſacrificing Mens Lives to a meer *Hypotheſis*.

To the ſame Degree of Inadvertency, not to call it Madneſs, did this Gentleman carry his grand *Antidote*, the *Bark*, which was thrown in upon every the leaſt Remiſſion, or before any Type was formed that might encourage the ſame to be given with Safety. It muſt be own'd he had great Succeſs in curing Fevers, about the Time he compil'd his Treatiſe upon that Subject, when the Fever, which was then *epidemical*, had undoubtedly a more than common Diſpoſition to the *intermittent* Kind. But ſhould we at all Times, (emboldened by his Example) fall upon the ſame Practice in a different Conſtitution of the Air, how fatal it muſt often be, I ſhall leave the moſt experienc'd of the Faculty to determine: being myſelf ſufficiently convinc'd by divers late

late Miſcarriages of ſome, through its ill-timed Adminiſtration.

But I ſhall no longer detain you with this learned Man's Hypotheſis, which was level'd rather to burn than freeze the poor Patient to Death; or if he happen'd to eſcape, it was to be however *through Fire*, as with a View to the ſame Author, our late Commentator upon *Hippoc. de Feb.* has thus expreſs'd it *. *Nam & Illæ ipſæ, quas adducit Hiſtoriæ, palam faciunt, pleroſque quorum. curam habuit ægrotos, aut excalefactos interiiſſe, aut ſaltem ὡς διὰ πυρὸς evaſiſſe.*

And thus in *Fevers*, requiring the moſt temperate or rather cooling *Regimen*, as thoſe of the *inflammatory* Kind; and particularly the confluent *Small Pox*, the Sick were ſure to be ſcorched up with the hotteſt Medicines, under a pretext of fortifying the Spirits, againſt a ſuppoſed Poiſon that had taken hold of them. It was ſuch Practice as this very probably gave offence to *Sydenham*, who that he might avoid one Extreme, was apt ſometimes, in all likelihood, to ſplit alſo upon the other; but enough of this.

* Comment. 7.

To enter now upon the Definitions of *Fevers*, given us by ſundry Writers, would be almoſt an endleſs and a uſeleſs Taſk; as containing very little Inſtruction, I might ſay none in the Cure thereof: Thus one tells us, that a *Fever* is nothing more than a *predominancy of the ſulphureo ſaline Particles over the ſalino ſulphureous*; a ſecond, that the Eſſence thereof depends upon the *inordinate Elevation or Exaltation of the oily or fiery Particles, above the terrene and watery.* The Chymiſts make a Stir about their *Acid* and *Alkaly*, contending for the Victory, together with the Diſcord of their *Principles.*

Our famous *Willis*, who was a *Fautor* to ſome of theſe, expreſſeth himſelf upon this Head in the following Words *:

Veruntamen ipſa febris, eſt ſolummodo Sanguis (cum liquore nervoſo ſucco alibili & ſero adſcititiis) qui excandeſcentia ſua, ſupra modum ebulliens & per vaſa cum impetu citatus, calorem præter naturalem in toto corpore diffundit, ac Febris rationem formalem inducit.

And coming to explain himſelf farther upon

* Opera *Williſij* apud nos Vol. I. *p.* 63.

the ſame, he goes on, *attamen quo pacto hoc fiat, non niſi ex Sanguinis ejuſdem Natura intime perſpecta, & liquoris ejus velut Anatome, Spiritu (ſcil.) ſulphure, ſale, terra, & phlegmate, planum habeatur.*

Some others of them have made ſhorter Work, as well in the Defining, as the Cure, confidently aſſerting that a *Fever* is nothing elſe but the *Archæus* enfaged; and accordingly boaſting of their ſeveral *Panacæa's* or *Sedativa*, aſſure us, that without any regard to Evacuation of *morbid Particles* or *peccant Matter*, the ſame will allay the Tumult, and render all tranquil, throughout the *animal Government*.

Related ſurely to this, is the Story of *Cardimelech* and *Michrocoſmeter*, ſo formally told by a late grave Writer * in his *Hiſtory* of *Phyſick*, altho' fit only to be inſerted in a *phyſical Romance*; but leaving this Jargon to the Tribe it belongs, and who under the vail of uncouth Epithets, myſterious, dark and obſcure Phraſes, or unintelligible Sounds, amuſe their Readers with ſtrange Notions of their *Myſ-*

* Dr. *F——d.*

ticks or profound *Philoſophy*, as being Nature's chief Favourites, and let into her Secrets: I ſhall take no farther Notice of them any more than of the *hypothetical* Writers peculiarly ſo denominated; but haſten to thoſe who are term'd *Mechanical*, where ſurely we may expect ſome greater Certainty and Satisfaction, as well as ſafer Guides to Practice, on the account of the mathematical Demonſtration here promis'd us.

But alas! dear Sir, I am afraid we are now as much bewildered as in the former, and that the Certainty theſe pretend to in their *Theorems*, *Propoſitions*, *Axioms*, *Lemma's*, *Scholia's*, *Corollaria's*, or whatever they pleaſe to call them, will afford us as little help in the Cure of *Fevers*, as thoſe we have now mentioned.

They tell us indeed, that the Body of Man, as of other Animals, is only a piece of *Mechaniſm*, form'd by *mechanick Laws*: That as the ſolid Parts are ſubjected to the Rules of *Geometry*, ſo are the Fluids to the *Hydroſtaticks*; and that there is always an *Æquilibrium* maintain'd between theſe two, when the *Machine* is in right order, which

is what we call the State of *Health*: Sickneſs being nothing elſe than a Diſorder of ſome kind, either in the *Solids* or the *Fluids*, by which the ſaid *Equilibrium* is deſtroy'd, or the *Balance* turn'd to one ſide or the other.

A *Standard* * *Bearer* who hath lately furniſh'd out a New *Theory of Phyſick*, reconcil'd to Sir *Iſaac Newton*'s *Principles*, is ſo very fond, and full of this *Balance of Nature*, that we have few pages without it.

Firſt of all, he tells us that all Diſeaſes, whether *Acute* or *Chronic*, 'depend on the 'Motions of the Veſſels elevated or depreſt 'beyond the *Standard of Nature*: And the 'ſeveral Degrees of them, to the ſeveral De'grees of Contraction or Relaxation of ſuch 'Veſſels; and the Motion of the Fluids con'ſequent thereon; for (ſaith he) an Aug'mentation or Contraction of the Veſſels ele'vated, *(do you mind me)* above the *Balance* 'of *Nature*, will increaſe the Diviſion of 'the Blood; which increaſed Diviſion of the 'Blood will augment the Motion, the Quan'tity and Heat, and ſo beget a *Fever*; which

* Dr. *R——n.*

'is no other than an increaſed Motion of the 'Blood from a vibration of the Veſſels a- 'bove the *Standard of Nature:* For there 'cannot be an inordinate Elevation of the 'oily or fiery Parts of the Blood, as Sir 'R——*d* B——*r* ſuppoſes, unleſs the *Solids* 'are equally elevated above the *Standard of* 'Nature. In a ſlight *Fever*, the Blood in- 'creaſes but little above the *Balance*, as in 'the *Ephemera*, which when of more than 'one day turns to a *Synochus*, which is but 'the ſame *Fever* farther augmented beyond 'the *Balance of Nature:* this turns to the 'putrid *Synochus*, and this to a *Cauſus*.

'Again, ſaith this expert *Mechanician*, as 'acute *Diſeaſes*, ſuch as *Fevers*, proceed from 'the Blood's thus increaſing above the *Ba-* 'lance; ſo *Chronics* proceed from the *Solids* 'depreſt beneath the *Balance* of *Nature*.'

Upon the firſt of theſe, for the ſake of its Singularity and Perſpicuity, I ſhall preſent you with a Thread of his Argument, that you may ſee how Sir *Iſaac* is carry'd all the way therein *.

* Vid. New *Theory* of *Phyſick* founded upon the Principles of Sir *Iſaac Newton*.

'From

'From an elevated Contraction, the Blood 'obtains a greater Force and Motion; hence 'greater Diviſion, hence an increaſe of Quanti-'ty and Fluidity: And thus from greater *Divi-'ſion, Motion* and *Quantity* increaſed, muſt ariſe 'Heat, Thirſt, with other concomitant Symp-'toms of a *Fever*; for the Blood *dividing* faſter 'than it can be detach'd through the perſpira-'tory Emunctories of the Skin, is the imme-'diate Cauſe of the Heart's preternatural beat-'ing: Which preternatural Diviſion of the 'Blood, ariſes from the additional quantity of 'the obſtructed perſpirable Matter, added to 'the natural quantity of the Blood: *but 'hear a little more.*

'The Cauſe of all acute, inflammatory '*Fevers*, ſuch as the *Quinſy*, *Pleuriſy*, *&c.* 'is from a Contraction of the Heart and Ar-'teries elevated above the *Balance of Nature*: 'This elevated Contraction cauſes the Blood 'to take up more room by fuſing it in the 'Arteries, which cauſes a greater glut to be 'determin'd upon the *Lungs*, *Pleura*, *inter-'coſtal Muſcles*, than the Veſſels of the ſame 'can diſpenſe with; which therefore cauſes 'Stagnation, turning to an *Inflammation*,

'which

'which cauſes all the Symptoms attending 'theſe Diſeaſes; but the Cauſe of *Quinſies* 'particularly is from the Blood's ſtagnating 'on the Parts of the *Larynx*: And the 'Blood ſtagnates upon the Parts of the *La-* 'rynx, becauſe the Contraction of the *caro-* 'tid Arteries is elevated above the *Balance*, 'which cauſes the greater glut than thoſe 'Parts can detach by the ſecretory Veſſels, 'upon which a Lodgment is made, which 'cauſes the *Inflammation*, *Fever*, *quick Pulſe*, 'and all the Symptoms.' You have heard the Story, I doubt not, of the Butcher that kill'd the Ox, that gor'd the Dog, that worry'd the Cat, that kill'd the Rat, that kill'd the Mouſe, that eat the Corn, that lay in the Houſe that *Jack* built.

Having now done with the *Inflammatory*, you ſhall have a Taſte only of the ſame *Mechaniſm*, in the *malignant Fever*.

'In very *malignant Fevers*, ſome Parts of 'the Blood are often ſeparated from the Maſs, 'when being by the Force of the Arteries 'driven beyond the ſphere of Attraction *(the 'Balance is laid aſide for the preſent)* they can 'never after join again therewith, becauſe of

'the

'the Blood's *Repulſion*; but aſſuming to them-
'ſelves an *attractive Power*, (*for you muſt underſtand, there is in the Blood an electrical Attraction as well as Repulſion*) 'they become
'the center of *Attraction* to every Thing that
'comes within their particular ſpheres: Where,
'on the Surface thus impel'd, they form
'*petechial Spots*, uſually accompanying *ma-*
'*lign Fevers.*'

Our learned *Mechanician* is indeed ſo modeſt, that when deſcending to the Cauſe, *i. e.* the primary, of theſe kind of *Fevers*, tho' he has diſcover'd that they proceed from the Air; yet how the Atoms are modify'd that conſtitute thoſe Qualities therein, which become ſo hurtful to us, he does frankly own the ſame to be *ſupra Captum.*

There being ſomewhat ſo uncommon, I think, in this Gentleman's cloſe purſuit of an Argument, I ſhall, if only for your Entertainment, deviate a little, to preſent you with his *Mechaniſm* of *Chronics.*

'Now, ſaith he, we are to conſider the
'Cure of Diſeaſes ariſing from another ſtate
'of the *Solids*, wherein the Blood forms *Viſ-*
'*cidities*, and of Conſequence, *chronic* Diſ-
'eaſes;

'eaſes; and the Blood forms *Viſcidities*, and 'conſequently *chronic* Diſeaſes, when its com-'pounding Particles go into too cloſe a Con-'tact; and they go into too cloſe a Contact 'when they receive not due Information from 'the *Solids*, when their contractile Powers 'are impair'd and ſunk in their Motions be-'neath the *Balance of Nature*: As to the 'Cure of theſe our Buſineſs is *(do you obſerve)* 'to get acquainted with a Set of Medicines, 'that will raiſe the impulſe of the *Solids*, in-'creaſe their natural Springineſs, and reſtore 'their *Machinulæ*, upon which their contrac-'tile Powers depend; which will enable them 'to fuſe the Blood, deſtroy the *Viſcidities*, 'and render them ſmall enough to paſs their '*Secretions*.'

From all this *mechanically* connected, having ſhewn us the Cure of *chronical* Diſeaſes, he gives us the following of *acute*, but particularly *Fevers*.

'That the Ground of all *Fevers* being in 'the Blood's dividing faſter than can be 'detach'd by the ſeveral *Emunctories*, from 'an Elevation of the *Solids* above the *Balance*; '*(which we have now again taken up)* Bleed-

'ing

'ing is conſequently the beſt Remedy to take 'off the Tenſion of the *Solids*, and ſubſtrac-'ting the Cauſe, by removing alſo ſome part 'of the additional Load. Secondly, To ad-'miniſter *Sudorifics* or Sweating Remedies; 'but if Sweating cannot be procur'd, you 'muſt laſtly puſh by *Purging*, which is to 'be repeated every other Day (*which he aſ-ſures you is juſtifiable by a great Man's Practice in a nervous Fever, where no Sweat could be raiſed, till after this Way was try'd by Purging*) 'Obſerving always to ſpur on the *Solids* in 'theſe ſluggiſh Caſes, where they are ſunk 'beneath the *Balance*. Laſtly, If there be a 'great Heat, a dry Skin, a hard Pulſe, black 'and dry Tongue towards the height of the 'Diſeaſe, and no Sweat can be procur'd; you 'are then to have recourſe to Purging; as the '*Aſylum*, and throw, (it ſeems) the Streſs of 'the Cure upon the Iſſue of the Operation of 'theſe Medicines.'

I have given you this Recital of a new phyſical Diſcovery, as a Specimen thereof, reconcil'd to *mechanic Principles*, or ſolved by thoſe of Sir *I. N——n*, as the Author terms it, that you may judge in what manner your

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Underſtanding is to be improv'd, or your Judgment better'd in the Cure of *Fevers*: I might have told you alſo, how far this wonderful Man has exceeded even Sir *I——c* himſelf, who never had Courage enough to define or meddle with the *motor primus* of the *Machine*, I mean the *animal Spirits*, contenting himſelf with his Principles of *Attraction* and *Gravitation*, whilſt our *Adept*, whether by *Fire* or *Water*, dogmatically, as from the *Delphic Oracle*, delivers himſelf thus.

'Both the *Solids* and *Fluids* of an animal 'Body are endow'd not only with this prin-'ciple of *Attraction* and *Repulſion*, but there 'is alſo in them an *electrical Attraction*: 'Their Actions are reciprocal, but the firſt 'Impulſe is from the *Solids*, whence Heat 'and Motion in the Blood.'

Would you know now what it is that gives this Motion to the *Solids*. 'The *Spi-'rits* give riſe to the Contraction of the 'Heart; the Heart gives Motion to theſe 'Spirits: The Particles of the Air *(here 'comes the Myſtery)* and *fine pungent Salts*, 'forcing into the Lungs, gives the firſt Prin-'ciple of Motion to the *animal Machine*; 'for

'for neither the influx of animal Spirits, 'much leſs the Ebullition and Accention of 'the Blood, can be the Cauſe of the Heart's 'Motion; but rather the ſame is effected by 'the ſaid aerial pungent Salts, pricking the 'fibrous Subſtance of this Bowel, or rather 'the Veſſels leading thereto; which is the 'Origin of all Pulſation, Motion of the Heart, 'and Circulation of the Blood.'

Thus Doctor, you ſee how the *impetum faciens* of *Hippocrates*, which has lain conceal'd as to its ὅτι for more than two thouſand Years, I may ſay from the time of the *Protoplaſt*, and by the greateſt Men of paſt Ages, as well as the preſent, was deem'd a *Problem* inexplicable: Inſomuch that our famous *Lower*, who was as well acquainted with the *Penetralia Cordis* as any Man, did acknowledge that it was the ſole Property of the grand καρδιογνώστης, who had form'd this *Viſcus*, to know the Reaſon alſo of its Motion: How this, I ſay, is now mechanically accounted for by Dr. *R——n*; but how he will get over that of the little *fœtus Machines*, whoſe Lungs were never ſtung nor twitch'd; nor yet the Veſſels leading to their Hearts, by

any of theſe *pungent*, *fine*, *aerial Salts*, I know not; and therefore muſt leave him to find out, whilſt I now come to remark ſome others, more profeſſedly in the *mathematical* Way.

In this number among the Foreigners, we muſt reckon *Borellus* and *Bellini*, alſo *Gulielmini*, *Baglivi*, *Bernoulli*, *Leibnitius*, *Morgagnus*, *Hermannus*, *Lanciſius*, *Mangetus*, *Aſtrucius*, *Mariottus*, *Littrius*, *Hombergius*, *Michellottus*, *Blancus*, *Fantonus*, with ſome others I could name: Nor among our own Countrymen, muſt I forget the excellently learned Dr. *Mead* and *Freind*, the late Dr: *J. Keill* and *Pitcairn*, Dr. *Cheyne*, *Jurin*, *Cockborn*, with others.

I am not unacquainted, ſince it grew modiſh for Phyſicians to draw *Diagrams* in their Writings, with the *dumb Language*, or the *conjuring Characters*, as they are named by ſome, we have had many Smatterers this Way: but whoever thoroughly weighs them with the reſt of their Performances, will find they have enter'd many of them as it were by Rote, pickt them out from *Propoſitions* or *Problems* of ſome of theſe; and ſet them down

to

to amuſe the leſs heedful Reader: And I purpoſely omit certain great and wonderful Men this Way, ſuch as that very tranſcendent Gentleman Sir *Iſaac Newton*, as profeſſedly *Mathematicians*, not *Phyſicians* meerly, with whom our Buſineſs is at preſent: Nor can I perſuade myſelf, that the Inventions of the former were ever intended ſo much to benefit the Art of Healing, which is not likely to be promoted by any *Letters* of the *Alphabet*, or *Figures in Arithmetic*, placed in what manner ſoever, neither yet by *Lines* of any ſort, as for the Advancement of *Aſtronomy*, *Geometry*, *Optics*, *Hydraulics*, *Hydroſtatics*, &c.

No ſurely, theſe great Men in their way, were too well apprized that the want of *Data* at theſe Times, of which all complain, would hinder any *Certainty*, i. e. *Mathematical*, to be obtain'd: And by ſome means or other render their *Calculi* very precarious.

For tho' the *Solids* of our Bodies being form'd by their Maker, according to the ſtricteſt Laws of *Geometry*, may be, in many Caſes, reconcilable to thoſe Rules, as appears evident from one we have already named *

* Borellus de motu Animalium.

in an admirable Treatiſe of the Motion of Animals: Yet are the *Fluids*, wherein moſt *acute Diſeaſes* (eſpecially that about which we are diſcourſing) affecting us, are concern'd, ſo widely differing from any other without us, as well as the Veſſels containing them, that the *Problems* founded upon *Hydraulics*, or *Hydroſtatics* either, will never reach them ſo exactly, but that we ſhall be ſtill liable to commit Miſtakes, and to be led into Errors, ſome of them of the utmoſt Conſequence to Life: Nor will any of theſe, aſſure yourſelf, at any Time, afford Help in the Cure of *Fevers*, where all your *Indications* muſt be taken from ſome preſent Appearance, unforeſeen, and which admits ſcarce any Argument, which is aſſumed *a priori*.

Alas! dear Doctor, what avails it to us, that we are told, *The Preſſure of an incumbent Fluid upon a Solid, is in Proportion to the Altitude? That Fluids running from a larger Syphon into a leſs, the Liquids run with the greater Velocity in the leſſer Tube? But if the total Sum of the Orifices of the leſſer Tubes be more numerous than the Area of the tranſverſe Sections of the greater, then the Fluids run*

ſlower

ſlower in the leſſer Tubes. What, that Fluids cannot move on, unleſs the impelling Force conquer the Reſiſtance, for who knows not this? or that in all, there is a Center of Gravity and Gravitation? What, that the Altitudes of Projectiles are to each other in a duplicate Ratio of their Velocities! What, again, that Cylinders are to each other in a Ratio compounded of their Baſes and Altitudes! that is, if the Baſe of one Cylinder be 9, *and another* 6, *and the Altitude of one* 4, *and the other* 2, *then are they to each other as* 4 × 9 = 36 *to* 6 × 2 = 12. *Again that Attraction of Bodies is as the Squares of their Diſtances; or that in a Cone, the greateſt Reſiſtance to Motion is at the Vertex: That if the Blood be ſo vitiated as that the Strengths be augmented or diminiſhed, 'tis the ſame as if the Blood offended in its Quantity: That the Heat of the Body is in a Ratio compounded of the Blood, its Celerity and its conſtituent Particles: That Quantities are to each other as the Denſity of the Radii, and this Denſity reciprocally as the Diſtance of the radiating Point, or as the Squares of the ſame Radii: That ſecreted Liquors in our Bodies differ in Degrees of Coheſion, Fluidity and Quantity:*

That a Fluid of equal Velocity with another, but of greater Gravity, gives a greater Ictus than one with equal Velocity and leſs Gravity: Laſtly, (to inſtance in no more) that in Cones the Reſiſtance is leaſt in their Axis.

What, I ſay, avails it to us in the Caſe of *Fevers*, to be acquainted with ſuch and many more that are prefix'd to a late Treatiſe of theſe Diſeaſes *, with which in Reſpect to the Cure of the ſame, they had for the moſt part, if not all of them, been as well left out.

Whether or not they are ſolidly founded, I ſhall not here diſpute, much leſs their Uſe in other Parts of the *Mechanics*, particularly, as I have already intimated, in *Hydraulic* and *Hydroſtatical* Experiments; but whoever conſiders the *Blood*, as a *Fluid* compounded of divers Parts, and varying from a hundred imperceptible Occaſions in its Texture; ſometimes running out into a thin *Fluor*, at others tending rather to *Grumeſcency*, together with its changeable *Impetus* from the Ciſtern, I mean the Heart, according to the Diſpence of the nervous Fluid, now more, then leſs

* Criticon Febrium.

interrup-

interrupted and continued. Again, whoever weighs rightly the Fabrick alſo of the Veſſels through which it circulates, their divers Elaſticity, Contraction and Dilatability in one Body from another; nay, even in one and the ſame Section, at ſome times, of the ſame Veſſel, from original Formation or adventitious Cauſes that are inſcrutable, at leaſt, during Life, which muſt influence the Motion thereof: Whoever, I ſay, will nicely obſerve theſe, which ſhall be preſently farther noticed, may ſoon perceive that no *arithmetical* Proportion, no *algebraic* Calculation, no *geometrical* Menſuration, no *Axioms* deduced from the *ſpecific Gravity* of other *Fluids*, their *Moments*, Degrees of *Attraction*, *Repulſion*, nor the impelling Force by which they are thrown forth their ſeveral Pipes, will give us any juſt or adequate Idea of *Fevers*, much leſs advantage us in their Cure, which you will find, after all, is to be founded only upon a diligent Obſervation, not of *Squares*, *Circles*, *Tangents*, *Angles* of *Incidents*, *Gravity*, *electrical Attraction*, or the like *cant Words*, (for they are no other when inſerted in a practical Diſcourſe of *Fevers*) but of *Nature*, which way moving to-

help herſelf, and *Remedies* by Experience found out, to forward ſuch her Endeavours; agreeable to what the ſame Perſon has laid down in another Part of his Treatiſe, *viz. That Phyſicians muſt at all Times avoid begging the Queſtion, or affirming any Thing contrary to known Experience, but proceed with Reaſon, back'd by the ſame, which is the ſole Prop they can ſecurely rely on.*

I muſt expect to be cenſur'd by ſome of theſe worthy Gentlemen, as an Enemy to theſe *phyſical* and *mathematical* Diſquiſitions, by which alone, they ſay, our Art can be ſet upon any ſolid Foundation, and the *Phænomena* of *Health* or *Sickneſs* intelligibly explain'd; but I deſire they will conſider that I am far from reprehending any ſuch Enquiries, among ſpeculative Perſons or otherwiſe, ſo far as we are thereby afforded any Help in our Way of healing the Sick, or furniſhed with ſatisfactory and certain Accounts how the *Phænomena* of human Bodies, either *ſound* or *diſeaſed*, are reconcileable to *mechanic Laws*, about which I have often buſied myſelf, and doubt not but greater Light has been given to Phyſick hereby, in this laſt Age, as well as

larger Inſight into the Nature of ſome Diſeaſes, than by all the myſtical Learning of the Antients, or the as unintelligible Explanations of the ſame, attempted ſince upon ſome other Principles: And I could wiſh it were poſſible (although I think, I muſt own, that it is not) with Dr. *Freind, that ſome able Hand would ſet this Matter in a true Light, and illuſtrate the ſame, ſo far as may be from the unalterable Laws which Nature has impreſt upon all Matter and Motion**; *for ſince the human Body (as he obſerves) is nothing elſe but a fine Contexture of Solids and Fluids, which obſerve the Rules of Mechaniſm, it is amazing to find that Men ſhould think of any other Principles than the mechanical, to explain it by.*

But then ſurely it is amazing alſo, that any Man ſhould take upon him to explain thoſe Appearances therein, which however in themſelves *mechanically* produced, he is never like to be thoroughly acquainted with the *Modus* of their Production, eſpecially if being out in his Conjecture, the Life of his Fellow Creature may be in Danger: For as our Coun-

* See his Hiſtory of Phyſick.

try-Man *Sydenham* has obſerv'd, 'there are 'two Sorts of Men (each in their turn liable 'to do Miſchief) who obſtruct the Improve-'ment of the Art of Phyſick: The firſt, 'thoſe who adding nothing to the Increaſe 'of the Art they profeſs, deſpiſe others who 'do improve it, hiding their Defect and 'Sloth under the Pretext of Reverence to *An-'tiquity*, from whence they will not recede 'a Hair's breadth. The ſecond, on the con-'trary, acting out of Levity of Mind, or 'affecting the Title of *profound Wits*, trouble-'ſomely intrude Speculations, many of them 'out of the Way, to advance the Cure of 'Diſeaſes, not ſo properly ſhewing the Way 'to Phyſicians, as making them ſtray from 'it, by their *ignes fatui*. Nature, ſaith he, 'has beſtow'd ſo much Wit upon theſe Peo-'ple, as enables them to trifle learnedly, but 'has fail'd them in the prudential Part, where-'by they ſhould know that they can under-'ſtand nothing any other Way than by *Ex-'perience*, which unvails her; for the abject 'Condition of the human Mind, being un-'able to riſe to an intuitive Science, is re-'ſtrain'd to the narrow Bounds of Know-'ledge,

'ledge, which it receives from the Senſes; ſo 'that notwithſtanding a Man may become 'prudent, as the human Lot will allow, yet 'a *Philoſopher*, according to the auguſt Ma-'jeſty of the Name, no Mortal can be: and 'therefore all the Phyſician's Philoſophy con-'ſiſts wholly in ſearching the *Hiſtory of Diſ-'eaſes*, and for *Remedies*, found only by *Ex-'perience*, that are able to overcome them; 'obſerving the Method which right Reaſon, 'founded on the common and natural Way 'of thinking, not the Commentaries of Spe-'culation, dictates to him *.

What tho' it be granted, as our learned Commentator † has remark'd, that *no Man goes about to account for the Motion of a Watch, by the precarious Principles of Acid and Alkali, or any other than the mechanical, by which it is put together.* Is it not alſo granted that no Man, by the ſame Principles, can rightly diſcover the ſeveral Defects in that little Machine, unleſs the Artificer, who being thoroughly acquainted with every Part of the *Movement*, can only ſee where ſome Defects thereof

* *Sydenham's* Practice of Phyſick.

† *F——d*, in his Hiſt. of Phyſick aforeſaid.

may

may happen to lie conceal'd from other Eyes? So likewiſe, I fear, notwithſtanding all Improvements this Way, it will ſometimes fall out with the *animal* one, where the Diſorder is viſible only to an all-ſeeing Eye, and where leſs Abilities than the Maker's, will be unable *mechanically* to adjuſt the ſame.

Let us then, good Sir, where there is Room, argue as much as may be, upon theſe Principles; but let us not pretend to found curative Indications, when Obſervation and Experience run counter, and will not juſtify the ſame; for if our *mechanic Theorems*, how nicely ſoever framed, are not confirm'd by theſe, what plainer Demonſtration can we have (and ſurely this is *Mathematical*) that we miſtook the Caſe? or that we are out in ſome part of our Account, whereby, as an Overſight in the minuteſt Fraction, overthrows the whole Computation, and lays us under a Neceſſity of a freſh Calculation? So happens it here, but with this unhappy Difference, that by the one we only loſe our Labour, by the other, it may be our Patient's Life; it is then ſurely your ſafeſt way (when ſo inclin'd) to diſcourſe *mechanically* of the Diſeaſe and its Symp-

Symptoms, over the Bottle, but to practiſe by *Obſervation* at the Bedſide of the Sick: All which I contend for, being this, that we carry not any of our Diſquiſitions of this kind, to Subjects unto which, through the imbecillity of our Intellects, they cannot with certainty be applied, at leaſt in ſuch manner, as to forward the Recovery of the Sick Perſon.

I hope they will conſider, we are not now applying the *Rule* to Bodies inanimate, or putting ſimple *Fluids* into the *Balance*: We are not counting the *Moments* of theſe under their ſeveral Preſſures or Impulſes, but the *Moments* (and ſurely momentous is the ſame) of *human Blood*: That the Lives of our Fellow Citizens, with which we are entruſted, are in the Scale: Shall we then put theſe upon a very uncertain Reckoning to be made this Way, which conſidering the Diſagreement among themſelves about ſome *phyſical Problems*, is ſcarce likely to be obtain'd at all?

And truly, Sir, whoever conſiders the Nature of *Fevers*, eſpecially ſuch as I call *Mali Moris*, will ſee abundant Cauſe, if I am not deceived myſelf, to think no *Rationale*, either *phyſical* or *mechanical*, is to be form'd thereon:

on? And that to pretend to argue thence at ſome times, is but to expoſe ourſelves to the Smile of the more eminent Artiſts; for undoubtedly all we know, or can underſtand of theſe, is this, that there is ſomewhat foreign, or preternatural got into the Blood, whether *extrinſic*, from the *Atmoſphere*, or *intrinſic*, through ſome treſpaſs in the *Nonnaturals*, ariſing within its Maſs, which being hereby exagitated and diſturbed, *Nature* (give me leave to uſe the vulgar Expreſſion) now rouſeth, and endeavours to free herſelf thereof: That ſometimes, notwithſtanding all Aſſiſtance from Art, ſhe is forced to ſuccumb; at others, of herſelf, even without ſuch Aid, ſhe gets the upper hand, and throws off her Enemy; but how this is tranſacted all this while in the *Sinus* of the Blood; how ſhe fits or prepares this Matter to be carry'd off, nor yet by what Paſſages or Outlets, is *a priori* to us impenetrable, and like to be ſo: Nor can any help from mathematical *Problems* inſtruct us how ſhe operates at theſe Times, or afford Help, not founded upon *Experience*, to ſupport her under the Conflict; for as we know not the Inſtruments ſhe intends to uſe,

nor

nor the way ſhe will take at all Times, to diſcharge herſelf of her Burthen; ſo neither will the Knowledge of the *Make or Texture, the ſpecific Gravity, Force of Attraction, or the like*, of any Remedy, either ſimple or compound, the better enable us to form a Judgment what it can effect, before it has been adminiſter'd, and found ſerviceable upon Trial, to anſwer the Intention.

I dare ſay none will alledge, that any one of theſe was ever given at firſt from the Knowledge meerly of their component Corpuſcles (were they to be found out) or their Propriety hence, to anſwer this or the other phyſical Intention, whether obtain'd in the way of chymical *Analyſis*, or any other.

As finding *Opium*, hereby, for Example, fitted to relax and take off the Tenſion of the *Membranes* and Fibres of the Brain, occaſioning the Inquietude, with attending *Vigil*, thereby procuring Eaſe and Reſt. That *Mercury* after the like Examination of its Parts, was found more fit than other Minerals, or Drug whatever to fuſe the Humours, and colliquate the Juices, in ſuch Manner as to force them to run off by the Glands of the

Fauces,

Fauces, by which the whole Maſs might be as it were refin'd and depurated: That *Steel* upon ſome ſuch Trial, was firſt obſerved better qualified than others, to invigorate the Blood, break its *Cohesions*, divide its *Lentor*, and by theſe Qualities enabled to reſtore a good Complection to *Cachectics* and *Chlorotics*; or that laſtly, having in like Manner ſcrutinized the *Crocus* of Antimony, 'twas found by ſome of its component Particles, that being therein ſteeped for ſome Hours, it would imbue the Wine, and that without loſs of its ſpecific Gravity, with a Power of inverting the *periſtaltic* Motion of the Stomach, and raiſe that particular Operation therein, which we call Vomiting. That theſe, I ſay, were therefore called into Uſe, upon the ſeveral Accounts here mentioned, but ſuch particular Effects having been found the uſual Conſequents of their ſeveral Adminiſtrations, after repeated Trials, they have been therefore for theſe Reaſons, and for theſe only made uſe of, when there ſeemed to us Occaſion for them.

From all which I would only infer, that this ſame *Experience*, founded upon a juſt and ſedulous Enquiry, and Obſervation of

what has, and is farther likely to enſue, under the ſame appearing Circumſtances, muſt guide us in all ſuch Caſes, where through the Nature thereof, we can have no *Præcognita*, as I think in *Fevers* we have not, without regard to *Propoſitions* or *Theorems* of any Kind, which ſerve only to puzzle or perplex, and too often, through Miſtake in Computation, ſubject us to fatal Errors.

I could tell you how I have been ſometimes interrupted by Perſons affecting this way of Converſation in the Practice of Phyſick: Particularly one, whoſe Head is ever full of the new Mode, was lately call'd in upon me: My Patient labouring under a *Peripneumony*, had been blooded three Times in ſo many Days, a Bliſter had been apply'd between his Shoulders, and ſeveral Pectorals adminiſter'd; but the *Dyſpnæa* ſtill continuing, with little Expectoration, and that a viſcid Phlegm, hard to be raiſed, the oily Medicines effecting nothing, I propoſed now in Conſultation, the *Oxymel Scyllit.* when the Gentleman objected the Hazard hereby, of relaxing the *Bronchiæ*, together with their orbicular Fibres, and hindering their contractile Power, which was

now

now wanting to ſqueeze out the viſcid Humour obſtructing the ſame: And therefore he was for *volatile Medicines*, as better fitted to invigorate the nervous Fibres, to divide the *Lentor*, deſtroy the *Cohesion* of the Blood, and give a Spring to the *Machinulæ* of the Lungs.

I gave little Heed to this Harangue, only ſmil'd, and left him then to act as he thought proper; but acquainting the Patient's Friends with the great Danger he was in, having agreed upon more *Bliſters*, I deſir'd a third Perſon might be ſent for, to meet us the ſame Day towards Evening. When by Appointment, coming together, and having farther conſider'd our Patient's Condition, the *Oxymel* being mention'd, the ſame Perſon repeating his Fears of relaxing the *Bronchus*, &c. the grave old Gentleman reply'd, pray Sir, no more fiddle faddle, if you can tell us upon your own Trial, of a better Remedy than the *Oxymel* on this Occaſion, let us have it; ſince there is no Laxity in the Bowels to forbid it, never fear the *Bronchiæ* being relaxed; if we can ſo far relax the Phlegm, as to fit it for Expectoration, 'tis all we have to do, nor

do

do I know a better Remedy under the preſent Circumſtances of the Patient, tho' all, I fear, will be inſufficient; accordingly the Mixture was preſcribed, but (ſuitable to the Prognoſtic) the Patient died next Day.

Not long after I had the Honour to meet the ſame Gentleman in a *pleuritick* Caſe, and here the Scene was chang'd: I know not how, nor what Axiom we went upon; but the *Oxymel* was now propounded to me. The Patient had taken freely of *pectoral Apoſems*, *oily Draughts*, with *Linctus's* between whiles of the ſame Oils: He had alſo been as largely blooded four ſeveral Times, the Pain ſtill continuing with as great Severity as ever; whilſt I, who long ſince learn'd from *Sydenham*, and had the ſame Leſſon confirm'd by the judicious Dr. *Freind* *, objected now againſt this, and told him, I thought all Pectorals of little ſervice in this Caſe, however preferable to other Remedies; the Diſeaſe lying out of their reach, as to Expectoration, unleſs complicated with Inflammation of the Lungs, or ſome way communicating with

* See his Chapter of a Pleuriſy *Comment. de Feb.*

the ſame, as in Caſes of adheſion the one to the other: I therefore offer'd my Thoughts, ſince the Pulſe flag'd, and diſcourag'd more Blood being drawn off by the Arm, to ſet on cupping Glaſſes on the pained Side, with light Scarification: Giving now the *volatile* Medicines, ſuch as the *Spir. C. C. per ſe*, which he had recommended in the former: He aſk'd, whether I propoſed the Cup by way of *Derivation* or *Revulſion?* I told him by the way of *Experience*, whence I had known much Benefit accrue in the like Caſes; or where it was hazardous to proceed farther by the Lancet, through the Patient's Weakneſs. At length, after ſome *mathematical* Bickering, this was comply'd with; and thereby, together with the *Volatiles*, intermix'd with Boles *ex Sper. Ceti cum pulv. e chel. Canc. c.* with more Bliſtering he contended for to break the *Lentour*, divide the *Cohesions*, *&c.* we recover'd our Patient out of imminent Danger.

This, Sir, only for Illuſtration of what I muſt contend for, that a ſteady and diligent Obſervation of *Nature*, conflicting with a Diſeaſe, whoſe *Ratio formalis* we are not certainly aquainted with, together with what upon

upon a ſeries of Succeſs, we have found ſerviceable on the like Occaſions, will conduct us moſt ſecurely to the method of Cure: And whatever Liberty theſe Perſons take with the Characters of others, who talk not in their way, on the foot of *Arithmetic* or *Algebra*, we find that the beſt Practitioners among them, can throw away their *Theorems* upon entering the Chambers of the Sick, and readily come into Meaſures with us, *viz. Obſervation* (aſſiſted with Reaſon and ſound Judgment) of what they have found moſt uſeful, under the like Circumſtances of the ſame Diſeaſe; for I am ſure it would be very difficult to find upon what *mathematical Propoſitions*, their common Preſcriptions, more than other Gentlemen's, are founded. To inſtance in ſome of theſe from Dr. *Pitcairn* *.

'A Diſeaſe is the circulatory Motion of 'the Blood, too much increaſed or dimi-'niſh'd; a Fever the Motion of the ſame in-'creas'd; a Symptom is ſomething in a liv-'ing Body, contrary to Health or the Actions 'of a living Body, or ſome Part thereof im-

* See his Summary of the Elements of Phyſick.

'pair'd; Life is the Circulation of the Blood,
'thrown out of the Heart through the Ar-
'teries, and returning again by the Veins;
'Health is a healthful Life, or a free Circu-
'lation of the Blood, without Pain, which
'is injur'd by the Encreaſe or Diminution of
'any Secretion; all Diſeaſes of the Fluids
'conſiſt either in a Change of their Qualities,
'or a Change of the Velocity in their Mo-
'tions; the Qualities of Fluids may be
'changed, and their Secretions either aug-
'mented or diminiſh'd; by the Changes of
'Matter and Motion, are produced all the
'Diſeaſes of a living Body, and their Cure
'muſt be by adjuſting the Changes of Matter
'and Motion; theſe Changes, whether for
'the better or the worſe, are perform'd by
'mechanic Laws; the Cure of every Diſeaſe,
'whether of the Solids or Fluids, are to be
'effected only by the ſaid Laws; all the Se-
'cretions in a living Body, are performed on-
'ly by the Laws of Mechaniſm, and pro-
'moted and reſtor'd by the ſame Laws.
'From the Suppreſſion of any Secretion, muſt
'neceſſarily ariſe a Diſeaſe; all the Parts of
'Fluids are in an Equilibrium; the Orifices
'of

'of all the ſecretory Organs are alike; all 'the Pores of the Glands are circular; there 'is no Difference but in their greater or leſſer 'Capacities; in two Places equally diſtant 'from the Heart, if the ſecerning Veſſels are 'equal in Number, the Quantity ſecerned in 'the firſt Place, ought to be to the Quantity 'ſecerned in the ſecond, as the Orifices of the 'firſt are to thoſe of the ſecond; if the Ori-'fices of the Veſſels are equal, the Quantity 'ſecern'd in the firſt Place, ought to be to 'that in the ſecond, as the Number of the 'ſecerning Veſſels in the firſt Place, is to the 'Number of the ſecerning Veſſels in the ſe-'cond; a Fluid whoſe Parts are all of the 'ſame Gravity, will equally paſs through e-'qual Orifices, and *e contra*. Where the 'Parts are not of equal Gravity, the heavier 'will deſcend to the Center, and the Mo-'tion of the flowing Parts will be encreas'd 'or diminiſh'd in a given Proportion to their 'Gravity; the heavier Parts of the Blood are 'thrown upon Places where there is the leaſt 'Motion; theſe are often lodg'd upon the 'Joints, whence the Gout; upon the Gall-'Bladder, whence the Gall-Stones; upon the

'Renal Ducts, hence Gravel in the Kidneys:
'If the Particles of the Blood have Inclina-
'tions in reſpect to ſome centripetal, and to
'others centrifugal, then a Separation of its
'Parts will more eaſily happen after Blood-
'letting, when it is left in the Veſſels leſs
'crouded.'

Theſe, with an hundred others, as little to the Purpoſe of a practical Phyſician, are ſet down for wonderful Improvements, but contain, I think, very little Inſtruction, I mean particularly as to the Cure of the ſeveral Species of Fevers. The Produce of the *Gout* and *Stone*, eſpecially from the *heavy* Parts of the Blood, ſeems an Explanation ſcarce worthy the excellent Author, or reconcileable to *mechanic* Laws; ſince there muſt doubtleſs concur more than ſimple Gravity therein, to the forming theſe Diſeaſes, except we could prove thoſe who have the *heavieſt Blood*, were moſt afflicted therewith; and that theſe *heavy* Parts tend naturally or *mechanically* to the *Joints*, the *Gall-Bladder* and *Kidneys*, which I think will be found a Difficulty.

To theſe *Axioms* of Dr. *Pitcairn*, I ſhall

here annex a ſhort Account of ſome *Propoſitions* from the notable *Bellini*, relating only to our ſubject: Theſe two being the more remarkable in this Way, whence you may form the better Judgment what Advantage is to be gain'd thereby, as to Practice; and whether their Followers have much regard to the ſame, in their *Formulæ* of medicinal Preſcription.

'There is no Fever without ſome Fault 'in the Blood, nor can that be faulty without ſome Way affecting its Motion, Quan-'tity or Quality, with each of which the 'Pulſe muſt be alſo ſome Way vitiated.

'Since then every Fever is conjoin'd with 'a faulty Pulſe, and this with ſome Fault in 'the Blood, it will be neceſſary to enquire 'after the ſeveral Ways the Blood may be 'diſorder'd; and whether each of theſe can 'affect the Pulſe: For having found that 'each, or all theſe Ways of rendering the 'Blood faulty, are neceſſarily conjoin'd with 'ſome Diſorder in the Pulſe, and the ſeveral 'Affections attending each particular Fever; 'we need not ſcruple to affirm that this or 'the other Fever is this or that particular 'Fault in the Blood, ariſing from this or the

'other Cauſe: And hence collecting all the 'ſeveral Faults under one common Genus, 'may we be able in general to define what 'a Fever truly is.

'From a Fault then in the Blood's Motion 'the Pulſe will be faulty, as alſo from its 'Quantity, either encreas'd or diminiſh'd. 'The chief Faults in its Quality are two, 'viz. its Principles ſomehow vitiated, or its 'Operations impeded: An Inſtance of the 'one we have when the Coheſion of its con-'ſtituent Parts is increaſed, whereby likewiſe 'the Pulſe will be diſorder'd, as from the 'ſame much leſſen'd; and from this faulty 'Coheſion, poſſibly, tho' not neceſſarily, may 'ariſe a Vice in the Pulſe.

'The Cauſe inhibiting the uſual Opera-'tions of this Fluid, is extrinſic to the Blood 'itſelf, ariſing from ſome foreign or adventi-'tious Particles, and is always attended with 'a Fault in the Pulſe, from Admixture of 'the ſame.

'There is therefore no Fever without ſome 'Fault in the Blood, its Motion, Quantity 'or Quality, ſome one or all of theſe.'

Next of his *Definitions* of *Fevers*, both general and particular.

1. ‘ Every Fever is either *continual* or *intermitting*; the *continual* being either ſimply ſo, or *periodic*, or *erratic*. The *Intermitting* is only *periodic*, or *erratic*; this being the neceſſary Diviſion of them, and containing the ſeveral Species.

2. ‘ A true *Ephemera* is a ſimple continual of twenty four Hours, finiſhing its Circuit ſometimes in fewer, ſometimes more.

3. ‘ The imputrid or *ſimple Synochus*, call'd *Inflativa*, conſiſts alſo of one ſimple Fit, at the cloſe whereof the Sick is no longer afflicted.

4. ‘ The *putrid* or *continent*, differs only from the former in its greater Heat, and more intenſe Affections, having one round alſo, when the Patient grows well.

5. ‘ The *Cauſus* or *Ardent*, that returns not by Period, differs alſo from the two preceding, in the ſeverer Burning or Heat, with extreme Thirſt accompanying.

6. ‘ The *Hectic* is a Fever with uniform Heat and Pulſe, except, that after Meals, both of them are increaſed.

7. ‘ As

7. 'As to the *Malign* or *Peſtilent*, all theſe 'are either *primary* and *eſſential*, or *ſecondary* 'and ſymptomatical, being for the moſt Part 'of the continual Kind, altho' they may both 'happen to intermit, eſpecially when depend-'ing upon Cauſes thereunto diſpoſing; of 'which Sort are the *Phlegmonodes*, *Eryſipela-'todes*, *Typhodes*, *Lenta*, *Morbilloſa*, *Varioloſa*.

8. 'The continued *periodical Quotidian* 'is a Fault in the Quality of the ſame Fluid 'the Blood, render'd leſs *fluxile*, by Means of 'a certain Lentor or Viſcidity therein, which 'being always the ſame, returns every Day, 'ſome terrene or earthy Parts ſticking in the 'capillary Arteries, whilſt the thinner paſs on 'or perſpire; this *Lentour* is ſupply'd from 'the Bowels, or ſome particular part of the 'Body; and conſtantly thus daily impacted 'in the Veſſels, gives riſe to this particular *In-'termittent* or *Quotidian* Fever.

9. 'The *continued periodic Tertian* is like-'wiſe a Fault in the Quality of the Blood, 'being render'd leſs *Fluxile*, through the 'Means of a certain *Lentour*, &c.

10. 'The *continued periodic Quartan* is al-'ſo a Fault in the Quality of the ſame Fluid,

'not

'not *Fluxile*, but by Means of a certain *Len-*
'*tour*, &c.

11. 'The *malignant*, in like Manner, is
'from a faulty Quality owing to a peculiar
'*Lentour*, moving up and down therein, and
'therewith fermenting, when ſometimes one,
'at others, ſome other Parts are obſtructed.

12. 'The *Plague* itſelf is a vitiated Quali-
'ty alſo in the ſame Fluid, where, by a cer-
'tain *Lentour* moving about, fermenting and
'perſpirable, ſome ſubtil Particles are enabled
'to penetrate the Bodies of others, and con-
'taminate the Blood of theſe in like Manner
'as thoſe they perſpire from, ſo that many
'are thereby deſtroy'd.

13. '*Symptomatic Fevers* are of the ſame
'Origin, and Production of the foregoing;
'each depending on a viſcid or lentous Hu-
'mour in the Blood, or as in the Caſe of
'*Worms*, from the Motion thereof vitiated:
'That is, as oft as the *Stimulus* thereby oc-
'caſioned, is able to produce the Symptoms
'concomitant to ſuch Fever: Upon which
'Account theſe *ſecondary* Fevers are reckon'd
'under the ſame *Genus* with the foregoing,
'already deſcribed, having nothing to dif-

'ference

'ference them, at leaſt eſſentially therefrom.

14. 'The Fever of the *Small Pox* is a 'Fault alſo in the Quality of the Blood, 'which being diſſolved, becomes partly *Len-* 'tous, and partly *Liquid*, whence ariſeth the 'whole ſeries of Affections above declared; 'and from whence is conſtituted this particu- 'lar Fever, going under the Appellation of '*Variolous.*

'Now ſince there is no Fever given, be- 'ſides theſe already deſcribed, or if there was, 'or could be given, but what may be reduced 'thereto, we infer that each of them ſeverally, 'is a Fault in the Blood, its Motion, Quan- 'tity, or Quality; or that a Fever itſelf is 'nothing elſe but this very Fault offending 'one of theſe three Ways, or accordingly as 'few or more of them are concern'd therein, 'ſome, or all.' *Q. E. D.*

Laſtly, a Word or two of his antecedent Cauſes of theſe Fevers.

'Whatever goes before every true *Ephe-* 'mera, will ſome way vitiate the Motion of 'the Blood; of which kind particularly are 'Paſſions of the Mind, preternatural Diſ- 'charges, too great or violent Exerciſe, Hun-

'ger

'ger and Thirſt, a hot Air, Perſpiration 'check'd by cold; ſo that this Fever is only 'a Fault in the Motion, Quantity or Quality 'of the Blood, one or all, of one Day's conti-'nuance, ariſing from the recited Occaſions, 'as an *Ephemera* of more days than one is 'the ſame Fault, protracted only to a longer 'Space.

'Again, whatever precedes the ſimple *Sy-'nochus* or *continent* Fever, may vitiate the 'Motion, Quantity or Quality of the Blood, 'and from ſuch Vice will neceſſarily enſue all 'which is conjoin'd to either, or follows af-'ter; hence then the ſimple *Synochus* is a 'Fault in the Motion, Quantity or Quality 'of the Blood, either, or all, ariſing from 'the ſame Cauſes, as the legitimate *Ephemera*, 'but ſomewhat more powerful, and of longer 'Continuance; whilſt the *Continent* is alſo 'the ſame Vice, but has yet a more power-'ful Cauſe than the ſimple *Synochus*, to bring 'the ſame into act.

'Farther, whatever goes before the *Cauſus* 'or burning Fever, vitiates alſo the Motion, 'Quantity or Quality of the ſame Fluid; 'and all whatever is conjoin'd, or ſucceeds

'thereto,

'thereto, ariſeth from the like Cauſes; ſo 'that it is plain, that the *Cauſus* having no 'Periods, may be refer'd to an *Ephemera* of 'more Days, and is the moſt intenſe of all 'the reſt; ariſing however from the ſame 'Cauſes, acting in a more intenſe Degree, 'produceable alſo by as many Ways as the 'reſt.

'To conclude, whatever ſo vitiates the 'Qualities of the Blood, as to kindle a greater 'Heat and Dryneſs than is natural, and de-'rive the ſame into the Habit of the Body, 'will by its continuance bring on a *hectic* Fe-'ver, which ſaid Fever has its Reſidence in 'the ſaid Habit, and is no other than a pre-'ternatural Heat and Dryneſs of the Blood, 'affecting the ſame, without Change or Al-'teration, having no other Cauſe to conſtitute 'its Eſſence than the foregoing *.'

I have given you this tedious Account of *Definitions* and *Propoſitions* of theſe two great Men: The laſt of which has been accounted as an *Oracle* by ſome, and wonderfully eſteem'd for having reduced *Fevers* by *mathe-*

* Vid. Bellini Propoſ. de Feb.

matical

matical Problems, to a certain Rule: That you might be enabled, if unacquainted with their Writings, to make a Judgment, what real Advantage, (as I have obſerved of the foregoing *Definitions*) is to be gather'd, or which way the Cure may be promoted thereby.

I muſt own that there are ſeveral alſo of theſe latter, which ſeem beneath ſo learned an Author to have obtruded upon us for Demonſtration, unleſs we could allow of many Things, which are *gratis dicta*, for ſuch.

There is indeed much Stir about a *Lentour* in the Blood, ſometimes more, ſometimes leſs, and at others, not at all *fluxile*, in which is placed its only Fault in Quality; but how or which Way the ſame gives Riſe to the ſeveral Species of Fevers, or can produce the divers *Phænomena* of each, is ſo far from being proved (at leaſt in my Opinion) that it cannot ſo much as be imagin'd upon ſuch Foundation: Yet this, with *Quantity* and *Motion* increaſed or diminiſh'd, are the *Triumvirate*, it ſhould ſeem, that preſide in all *Fevers*.

'Tis granted that this *Lentour* may be thicker or thinner, moveable or fix'd: But why,

in

in one, it produces *Coma Somnolentum*, in another *Vigil*; in one *Languor* and *Deliquium*, in another *Fury* and *Orgaſm*, with increaſed Strength; in one a conſtipated Belly, in another violent Purging; in one a white and a moiſt Tongue, in another a dry, black and ſcabrous; Why, in one, there is thrown forth a Puſtulary, whether *miliary*, or *variolous* Eruption; in another the *Rubeolæ*, *Petechiæ*, or the ſimple *raſhy* Efflorescence, either *Morbillous*, *Eryſipelatous* or *Scarlatine*; How theſe, I ſay, with an hundred others, ſpecifically divers Appearances, in Fevers, are reconcileable to the more or leſs Fluxility of a ſimple *Lentour*, is hard to conceive; nor can I perſuade myſelf, but that the true and real Cauſe of moſt of theſe *Phænomena*, as well as the *modus* of Nature, in preparing and fitting the Matter of the Diſeaſe, to be thrown forth, will ever be hidden from us. We may, 'tis true, perplex ourſelves, to find out her Way of working, but how often does ſhe diſappoint us, in moving a direct contrary one, to that which Art was intending to impoſe upon her? How often does ſhe eaſe herſelf by Sweats, which we were never able to force

out: How oft by Vomit or by Stools? How frequently by Spit, or by some *Abscess* unexpected, unforeseen? In a Word, how common is it for her to extricate herself, or get disintangled from a Weight, we thought was unsurmountable; as at other Times, we see her forced to lie down, and vanquish'd, when we believ'd she had got the Victory, and that the Danger was now past.

But lest I should seem trifling also and tiresome, by prosecuting these Remarks, I must only desire you, after all that I have here quoted, to observe whether the *Praxis* of these Gentlemen, some of them at least, is taken from their *Theorems*; or in what it differs from others? If so, whether their Success in curing Fevers by *Algebra*, *Geometry*, *Arithmetic*, &c. has exceeded that plain Method, which was gather'd by our honest *Sydenham*, from *Observation* only, without Regard to these? I dare say, if you look over the *Materia Medica* of Dr. *Pitcairn*, Master *Boerhaave*, or any other who have made the same Publick; you will find none better suited to answer the medical Intention, than those of that very heedful Physician, who

had nothing more in View than how to relieve oppreſſed Nature, in ſuch way as ſhe ſeemed of herſelf to direct, by ſome certain, but faint Overtures, and ſuch means as a ſettled Practice, and multiply'd *Experience*, had warranted for the ſafeſt: By quitting whereof, and running upon *phyſico-mechanical Problems*, laid down in the way abovemention'd, I know many dangerous Miſtakes are daily committed, by ſuch as have not duly weigh'd them, nor rightly underſtood them.

Thus one tells us, that in every Fever the Blood muſt be drawn off in a large Quantity; the following are his own Words *.

'The firſt Thing incumbent upon a Phyſician 'in Fevers, is to let out a conſiderable Quan-'tity of Blood, in order to remove the Cauſe 'of the ſame, which is founded *(for you ſee 'he cites his Voucher)* on the fifth and ſixth 'Propoſition of *Bellini de Feb.* in theſe Words. *Vena in omni morbo eſt ſecanda, in quo minuenda quantitas, aut augenda velocitas, aut refrigerandum, aut humectandum, aut aliquid adhærens vaſis dimovendum, aut abripiendum*; he might

* See Preface to the New *Theory* of *Fevers*.

have added ſurely, *aut aliud aliquid agendum.*

'A ſecond tells us, that the Blood being 'at theſe times too much rarify'd, whatever 'takes off the Rarefaction, (and nothing can 'do this ſo ſpeedily as Bleeding) cures the 'Fever of what kind ſoever.

'But a third ſays, the Blood divides too 'faſt at ſuch Times, by which its *electrical* '*Attraction* is weakned; and therefore Bleed-'ing, as deſtroying the Medium between the '*centripetal* and the *centrifugal* Parts, muſt be 'dreaded above all Things, as every Thing that 'raiſes or depreſſes them above or beneath 'the *Balance.*

'A fourth, on the other Side, again cries 'out, that the Blood in every Fever is apt 'to run into *Coheſion*, and that theſe viſcid 'Parts are beſt removed by *Phlebotomy* or *Ve-'næſection*; after which you muſt get ac-'quainted with Remedies to break the re-'maining *Lentor*, dig down the Obſtruction 'of the Glands, and drive forwards the Hu-'mours impacted in the ſmaller Canals, this 'being the true *mechanic* Cure of Fevers.'

To this purpoſe, one of them has propoſed *Steel Medicines*, another *Mercurial*, as the

moſt powerful glandular Detergents; but then wiſely conſidering the Heat, and Diſturbance given thereby to the Blood, by which the Fever, at leaſt during ſome time, would be encreaſed, he diſſuades the Experiment: Whilſt another has propoſed a *mercurial Salivation* in the worſt kind of Fevers; but for the like Reaſon, *viz.* leſt the Patient ſhould die in the way to his Cure, or before the Salivation could be raiſed, as wiſely forbids the ſame.

So ſtrangely are Men of ſtrong Judgment and clear Reaſoning, oftentimes bewilder, eſpecially when their Heads are turn'd this Way, or when they forſake *Nature*, for the ſake of *mechanic Principles* in Phyſick, or *mathematical Problems*; which however contain little more than an *Hypotheſis*, and that often of dangerous Conſequence, terminating in uſeleſs *Theory* or Speculation: And ſurely, till we come to change this kind of *ſtudying Phyſick*, as it is called, for the *ſtudy of Diſeaſes*, and their natural Cure, we ſhall ſtudy to little Purpoſe: For the more we deflect from *Nature* and her Operations, laying aſide *Obſervation*, and *Experience*, or building upon

Theorems

Theorems of any kind, the more likely ſhall we be to deſtroy our Patients.

Dr. *Sydenham*, ſpeaking of thoſe *inflammatory* Fevers he calls *Intercurrents*, ſo far, ſaith he, 'as we can underſtand by weighing duly their Symptoms, and the Appearances belonging to them, and the Method of their Cure, they owe their Original to ſome peculiar Inflammation of the Blood, that is proper to each: and I count the chief buſineſs of Cure conſiſts in cooling and qualifying the Commotion thereof. Upon which account I wholly endeavour to eject the morbifick Matter by ſuch a Method as I find agreeable to the *Genius* of the Fever, and prov'd by *Experience*, to cure the ſame. For he only hits the Mark who certainly foreſees by what Way the febrile Matter is to be excluded, as by *Bleeding*, *Sweating*, *Purging*, or other Methods.' Which, as above, is better learned from *Experience* than any *phyſical Axioms*.

Had you but ſeen the Library of *Alkalinus*, you might have known his Opinion, that not many Books but much Buſineſs muſt compleat a Phyſician: For truly, it was a ſettled

Maxim with him, that the more of theſe a young Phyſician looks over, unleſs he is very careful in their Choice, the more ſick People he will be ſure to kill; and that a good Play or a Romance was better than any of them: But I can by no Means come up to this very ſupine and indolent Man's Thoughts herein; for doubtleſs without ſome Pains taken this way, or conſulting thoſe practical Writers who have gone before us, a young Man's Judgment can never be well grounded: It muſt be unſtable, nor can he ever ſatisfy himſelf, or others, in what he is going about, or what he has to encounter, till he has made a ſufficient number of Obſervations himſelf, Nature ſo often ſhifting from one Appearance to another: The Difficulty is in your choice of Guides; for 'tis our great Misfortune, that thoſe Gentlemen who are able to do moſt this way, are for the moſt part ſilent; and the writing Taſk falls chiefly to the *Theoriſts*, who being big with ſome *Hypotheſis*, are impatient till they are delivered thereof, or to the *mercenary* Scribes, who without other regard write for their own and their Bookſeller's Profit, rather than the Reader's: How elſe ſurely

has it fallen out, that for almoſt a Century paſt, *France* can boaſt but of one *Riverius*, and *England* but of one *Sydenham*? I mean as Compilers of a general Body of Phyſick, truly ſerviceable or uſeful to the practical Phyſician; by no means derogating at the ſame Time from many others, who have learnedly and ſolidly diſcuſt ſome particular Parts thereof, with which it is convenient you ſhould be acquainted. For though a fortunate *Genius*, with an uncommon Sagacity in the *medical Prediction*, without trouble of reading Books, procur'd to the Perſon we but now mentioned, great Wealth as well as Reputation; yet every one, you know, is not born to ſuch Fortune, nor is it half ſo material whether you die a *rich* one, as an *honeſt* underſtanding Phyſician, and a *good Man*.

I hope now, from what I have here alledg'd, to take off any Gentleman's Reſentment againſt me, as an Enemy to Learning, in which, how meanly ſoever qualify'd myſelf, no Man has a greater Value for the ſame, even for ſuch *mathematical Enquiries* as will enable us to reaſon rightly, or upon certain Principles, about ſuch phyſical Ap-

pearances in human Bodies, as the Subject of our Enquiry is truly capable of, but which this of *Fevers*, I fear is not, nor ever will, as to many of the *Phænomena* occurring daily to us in our Practice.

I can believe as much of the *Machinery* as any of them: that the Bodies of all Animals, together with our own, tho' not produced at firſt by *Mechaniſm*, are form'd according to *mechanic Rules*, ſubject to ſuch Laws, and that all the Diſorders happening therein, as well to the *Solid* as the *Fluid* Parts thereof, are to be rectify'd thereby, if we knew how. And when I have ſeen one of theſe notable *Mechanicians* make me but a *Fly*, or put Life into any other *Automaton*, how deſpicable ſoever, I ſhall own, when the ſame is ſick, or which is all one, diſorder'd in any of its *Machinulæ*, or other the hidden, and to me, imperceptible Springs thereof, (whether the ſame has happen'd to the *Solids contracted or relaxed above or beneath the Balance or Æquilibrum* appointed them, or by Means of the *Fluids running into Coheſion, and ſtopping at ſome Angle of Incidence*) that he will preſently diſcover the Defect, and rectify it, with as much eaſe

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as the Watchmaker does thoſe in a Piece of his own Work; but till then, I dare ſay you will pardon me, whatever they may do, if I ſuſpend my Thoughts, or deliver them in this Way, that the ſupreme Being who preſided not only in the *cœlnical Mechaniſm*, but at the forming all others therein, whether animate or inanimate, is only able to reduce Medicine in all its Parts, under theſe Principles: He who is acquainted with the *Primordia* or firſt Seeds of Diſeaſes, before they come into act and produce Symptoms, by which only we can know them, and then too often but by gueſs: He, I ſay, that by an all-ſeeing Eye, and infinite Underſtanding, can at once ſurvey the whole Machine, and view how his Handmaid *Nature* is at work, is the only *mathematical Phyſician*; and there is no Part of the Movement, whether relating to the *Hydraulic*, *Pneumatic*, or any other the *arithmetical* or *geometrical* Properties thereof, but he can inſtantly ſee through, and no one elſe.

Whether it derives much Honour to ſome, I will not ſay, who, tho' their Writings are full of theſe Terms, *Mechaniſm*, *mechanic Laws*, *ſettled and eſtabliſhed Courſe* of *Nature*, and

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the like Phraſes; yet, as the honourable Mr. *Boyle* * obſerves, whoever takes Notice of the Mode of their Expreſſion, (at leaſt many of them) would be induced to think, that the *Natura naturata*, and not the *Naturans*, took up the chief Place in their Thoughts, or that theſe Laws were eſtabliſh'd ſomehow or other, without a *Lawgiver* to appoint or direct them; ſo that there is leſs wonder, that to the Diſgrace of both Profeſſions, the *tres Mathematici* have been reckon'd with the *tres Medici*, as to their Principles of another Kind. But this being foreign to us at this Time, may ſeem a Deviation; and yet I cannot leave it without this farther Mark of Admiration, that *Phyſicians*, who of all People upon the Earth, by the anatomical Inſpection of human Bodies where they ſee each Organ ſo ſtupendouſly framed, and ſo admirably fitted for their ſeveral Uſes, have the greateſt Reaſon to be convinc'd of the infinite Wiſdom of the great Δημιουργὸς, as the *Mathematician* from his Knowledge of the exact Symmetry and geometrical Proportion thereof, together

* Enquiry into the vulgarly received Notion of Nature.

with

with that of the celeſtial Bodies, falling under his Inſpection, of his infinite Power, ſhould yet be ſome of them the greateſt *Sceptick*s, to call them by no harſher Names: But ſo it happens, through the Force of Cuſtom, or Prevalency of Habit, that like other looſe principled Perſons, the one ſort overlook the Supreme Architect, and terminate all in what they call *Nature*, ſimple *Nature*, whilſt the other are ſo abſorpt as it were in Matter, that they can have no Idea of *Incorporeity*, *Immateriality*, or *Immortality*: Theſe being *metaphyſical*, and belonging to another Science, are out of their *Creed*, as not admitting that kind of Certainty they pretend to; altho' many Properties, even of Bodies themſelves, ſuch, particularly, as the common Cement or *Kinculum*, which holds their Parts together, is as hard to be come at, as the Knowledge of *angelic Beings*: So that the neglect of theſe important Truths cannot ſurely proceed ſo much from the want of Thought, (ſince none think more than Mathematicians) as that of due Reflection; for doubtleſs it cannot be overmuch Wiſdom that has made them thus mad, nor can they be ſo conceited

as

as to believe there is no other than their own; tho' I know it will be hard to perſuade them that theirs, like the reſt of the World's, is *Fooliſhneſs*: But leſt by ſome of theſe, I ſhould be thought preaching, which I own belongs not to my Province, a Mode of Diſcourſe they are leſs accuſtomed to, 'tis time, perhaps, *ut manum de his, ex Tabula.* So that reſuming our Subject, I will now endeavour to ſet this Affair in a better Light, and doubt not to ſhew, that after much Harangue on the Neceſſity and Uſefulneſs of this Kind of Knowledge, to a practical Phyſician, they tacitly give up the Argument themſelves, in owning, after much *Ambages* of Words, that it muſt be *Experience* which can enable us not only to foretel the Iſſue of the Diſeaſe, but the Effect alſo of the Remedy adminiſter'd; and that where we cannot have ſufficient *Data* to go upon, all Argumentation of this Kind is but Amuſement; which we ſhall endeavour to make good from a late Proeme of a teaching *Phylomath* to his *Principles of Phyſick* *, running thus,

* See *Morgan*'s Introduction to his Philoſophic Principles of Phyſick.

'Since the Animal Body is a *Machine*, and '*Diſeaſes* nothing elſe but its particular Irre-'gularities, Defects and Diſorders, a blind 'Man might as well pretend to regulate a 'Piece of Clock-Work, or a deaf Man to 'tune an Organ, as one ignorant of *Mathema-'tics*, and *Mechanics*, to cure Diſeaſes, with-'out underſtanding the natural Organiſation, 'Structure and Operations of the *Machine*, 'which he undertakes to regulate: And as 'there are two Things neceſſary to conſtitute a 'good Philoſopher, namely, a juſt Acquain-'tance with the *Phænomena* of Nature, 'grounded upon accurate Obſervations and 'Experiments, and a competent Skill in *A-'rithmetic*, *Geometry* and *Algebra*, to enable 'him to reduce the Forces and Operations 'of Bodies to a *Calculus*, in order to find out 'the Adequation and Proportion between the 'natural Cauſes and their Effects; ſo the like '*mathematical* and *mechanical* Reaſoning, 'join'd with the *Hiſtory of Diſeaſes*, their 'Symptoms and Cure, drawn from *Experi-'ence*, are both neceſſary in *Phyſicians*, and 'one without the other is altogether inſuffi-'cient.

'Tis

'Tis a little ſurprizing therefore, to hear ſome Gentlemen of the Faculty, declaim againſt *mathematical* and *mechanical Theorems, in re Medica*, ſince this is in effect, to maintain that Medicine is grounded upon no Principle at all; that if Diſeaſes are cur'd, it muſt be by chance; and that conſequently there is no Difference but that of a *Diploma*, between a *Phyſician* and a *Quack*, *(who, by the Way, is ſeldom in want of that, even from ſome of our own Univerſities.)*

'Tis evident to all Experience, that new Species of Diſeaſes, or new Symptoms, attending the ſame Diſeaſes, daily ariſe, and offer themſelves in the Practice of every Phyſician, in which the Hiſtory of Diſeaſes can be of little Uſe *(and I am ſure mathematical Problems of much leſs)* and in this Caſe, where Experience fails, as it will in one thouſand Inſtances, every one, how much ſoever he may declaim againſt *Theories*, recurs to his own, ſuch as it is, true or falſe, right or wrong; and accordingly attempts the Cure, at leaſt for the Experiment's Sake, and the Patient often pays dear *(tho' perhaps he may come off cheaper than when tied*

'*to a Propoſition, a la mode Matheſis)* for 'what the Doctor decries, only becauſe he 'does not underſtand: So that a moderate 'Skill in this Sience, and a tolerable Acquain-'tance with the *mechanical Powers*, begin to 'be reckon'd a neceſſary Qualification *(if not 'for a Teacher)* for one who would make a 'Figure *(do you mind him)* in his Profeſſion, 'and 'tis to be hop'd, that this, in time, will 'come to be allow'd the true *Characteriſtic* of 'a reaſonable Phyſician, (i. e. *a talking rather 'than a practical one)* as diſtinguiſh'd from 'an *Empiric*; and indeed, ſince it is the 'Buſineſs of the former to aſſiſt Nature in 'her Operations under the moſt nice and dif-'ficult Circumſtances, it is impoſſible he 'ſhould acquit himſelf herein with Satisfac-'tion and Succeſs, or act otherwiſe than at 'blind random, if he has not the Skill of 'applying, as occaſion ſerves, *mathematical 'Quantities* and Proportions, to the *mechani-'cal Powers*, upon which all the Laws of 'the animal Oeconomy, with the Effects and 'Conſequents of Motion, in the mutual 'Action and Re-action of Bodies, entirely 'depend.'

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Before I proceed farther with this bluſtering Gentleman, and his bold Advances, give me leave to make ſome ſhort and modeſt Remarks upon what he has deliver'd.

We have already own'd the Body of Man to be form'd *mechanically*, or in our Author's Words, to be an *Animal Machine*: And we think it neceſſary that every one, who ſets about the rectifying its Diſorders, ought to be well acquainted with the Structure thereof, which is gain'd only by anatomical Diſſection, or a juſt Inſpection of its Parts: But ſince the niceſt Scrutiny we can make, will diſcover nothing to us of the Seeds of Diſeaſes, nor of Nature's Proceſs in encountering with the ſame, unleſs from what is paſt; ſo a diligent Obſervation thereof, made by a ſound Judgment, together with a ſuitable Experience of what has beſt ſucceeded at ſuch Times, or under the like Appearance, we believe the moſt neceſſary to a practical Phyſician; being by the one, enabled to form Diagnoſtic Signs, by the other the Prognoſtic, as well as Cure: But for any Man to tell us, that unleſs we can apply *mathematical Quantities* and *Proportions*, to *mechanic Powers*, and

and reduce the Forces and Operations of Bodies to an exact *Calculus*, in order to find out the *Adequation* and Proportion between *natural Cauſes* and their Effects (which is the ſole Privilege of him that made them) we cannot acquit ourſelves with Succeſs, but muſt act at random, is both diſingenious and diſingenuous.

'Tis true, he owns, that to theſe may be added the *Hiſtory of Diſeaſes*, their Symptoms and Cure, drawn from *Experience*, not from *Arithmetic*, *Geometry* or *Algebra*, which we deny to be thoſe neceſſary Qualifications he pretends to, as to the Cure of all Diſeaſes.

If to this it ſhould be anſwer'd, what Principles muſt we go upon, or how muſt we diſtinguiſh a *Phyſician* from a meer *Empiric*? I reply, we have the Principles of Reaſon, which when confirm'd by *Obſervation* and *Experience*, are all we can pretend to, or ever ſhall obtain, eſpecially in the Cure of *Fevers*; all others we muſt renounce, and ſo muſt he, notwithſtanding his Attainments in theſe Sciences: But if he thinks to acquit himſelf with the greater Reputation, he may, (if he can) perſuade the Sick that he was recover'd,

by adjuſting *mathematical Quantities* to *mechanic Powers*; and it is by this Principle of right Reaſoning from *Obſervation* and *Experience*, back'd with a true Knowledge of the Structure of the Parts, not from any *arithmetical Calculi*, of which the *Phænomena* in Fevers are entirely incapable, that we diſtinguiſh a *Phyſician* from a *Quack*, who being ignorant of the Nature and Seat of the Diſeaſe, preſcribes his Medicine, as our Author ſays, at random.

But tracing this *Philomath* a little farther *, we ſhall preſently ſee, if he comes not to an Acknowledgment, that ours are the ſoundeſt *Principles*, after all this babble of *Quantities* and *Numbers*, at leaſt the ſafeſt in which we can confide.

'Tis plain, ſaith he, that the Names of 'Diſeaſes, under their common Acceptation, 'are affixt, not to their real internal Conſti-'tution, or morbific State itſelf, but to the 'complication of Symptoms, or outward 'ſenſible Appearances: which complication 'of Symptoms join'd together under a com-'mon Name, conſtitutes the *complex Idea* or

* Idem ibidem.

'nomi-

nominal Eſſence of this, or the other particular Sort or Species of Diſeaſes.

Thus when the biliary Ducts or Pipes, which convey the *Bile* from the *Liver* to the *Inteſtines* are obſtructed, the conſequent Symptoms, ſuch as the *Yellowneſs*, the *hard white Stools*, the *Coſtiveneſs*, the *thick turbid Urine*, with the other Symptoms uſually attending the Diſeaſe, being joined together, under a common Name and complex Idea, is called the *Jaundice*; which Diſeaſe would paſs under the ſame Name, and admit of the ſame Cure, tho' the Cauſe of it, or the Obſtruction of the biliary Pipes, ſhould be abſolutely unknown, or never once thought of: but then 'tis plain in this Caſe, that the Obſtruction of the *Bile* is ſtrictly and properly the Diſeaſe; and the Complication of Symptoms to which the Name is affixed in common Acceptation, are only the Effects and Conſequents of it. And after the ſame Manner, any original proper Diſeaſe, as it reſpects the internal State and Diſpoſition of the Organs and Fluids, may be conſider'd as the Cauſe of the conſequent Symptoms. And this Method of reaſoning from

'the Effects to the Cauſe, that is from the 'Symptoms given to find out the internal 'real and proper Diſeaſe, is of ſuch Conſe-'quence, that a Phyſician can make no ra-'tional Judgment without it. 'Tis this Ca-'pacity and Skill of Reaſoning from the 'Symptom to the internal, Original and pro-'per Diſeaſe, that diſtinguiſhes a *Phyſician* 'from a *Quack* or ignorant Pretender; and 'that renders his Judgment preferable to that 'of a *Nurſe*, a *Midwife*, or a *Country Farmer*, 'who might chance by *Recipe's* to cure a '*Jaundice*, or any other Diſeaſe, without 'knowing what it is, or from whence its 'Symptoms ariſe.

'I have inſtanced here in a *Jaundice*, be-'ing a popular Diſeaſe, and commonly 'known; but what has been ſaid, may be 'equally apply'd to a *Fever*, a *Dropſy*, or any 'other Diſeaſe. 'Tis therefore a right Know-'ledge of the *animal Machine*, and a juſt 'reaſoning thereupon from Effects to their 'Cauſes, from the outward ſenſible Appear-'ances to their internal and more remote O-'riginals, Sources or Fountains, that can a-'lone qualify a Phyſician to make ſuch

'Judg-

'Judgment of Diſeaſes, as muſt ſecure his 'Succeſs, and juſtify his Practice.'

But, pray Sir, after all this Elocution, or Fencing with fine Words, What is this to the adjuſting *mathematic Quantities* to *mechanic Powers?* Or what that he aſſerts herein, which we deny! I have already told you, that a Phyſician is throughly to acquaint himſelf with the Structure of the Body, as well in the State of Sickneſs, as of Health; that he is to be ſedulous in obſerving how the Parts are alter'd by ſuch Sickneſs; what Symptoms attend upon ſuch and ſuch Diſeaſes, as well as ſuch particular Parts diſeaſed, with their uſual Conſequences; by which, when the like ſhall again happen, he may be prepar'd as well from *Diagnoſtic* Signs as *Prognoſtic*, to pronounce what the Diſeaſe is, and how like to determine. Laſtly, I have told you, that from *Experience* of the Succeſs enſuing this or the other Method, under the like Appearances, he is farther enabled to proſecute the Cure.

To inſtance in the ſame Diſtemper, here given as a Specimen, by our Author, the *Jaundice*, and that in our own Way: Is it

not by anatomical Diſſection, and Inſpection of Bodies deceas'd by Means of this Diſtemper, that we diſcover the Liver oftentimes *Scirrhous*, eſpecially when the ſame was confirm'd, by which the bilious Juice, not being ſecerned from its glandules, regurgitates into the Blood, and in its Circuit tinges the whole Surface of the Body, more remarkably conſpicuous on the *Tunica adnata* or white of the Eye; or being ſeparated, yet ſtopt by ſome cryſtaliſed Salts in its excretory Ducts; particularly that which empties itſelf into the *Duodenum*, by which the ſame Effect is brought about, with excruciating Pains attending the ſaid Obſtruction. Do we not hence obſerve, that the *inteſtinal Fæces*, no longer ting'd thereby, contrary to their uſual Colour, appear *Chylous*, or of a whitiſh Aſpect; whilſt the Urine of theſe People, now ſaturated beyond Meaſure with the bilious Salts, becomes *Lixivial*, loaden often with Contents of the ſame Complection? Do we not farther obſerve the Sick thus labouring, to complain of *Faintneſs*, *Choleric Vomitings*, *Liſtleſneſs* to *Action*, *Itching all about his Body*? And laſtly, do we not daily ſee the

ſame

ſame complicate with a Dropſy, when by Reaſon of rotten *Viſcera*, diſcover'd alſo by Diſſection, the Caſe is fatal? All this, I ſay, we have from *Obſervation* of morbid Bodies, which afford us Signs both *Diagnoſtic* and *Prognoſtic* of the Diſeaſe in general. And is it not now from *Experience* only that we have found ſome particular Remedies, whether Simple or Compound, moſt prevalent in removing theſe Obſtructions, in order to the Cure, when the Diſtemper is not too many for us: Such I mean as the *Rad. Rhei. Curcumæ. Rub. Tinct. Chelydon.* the *Cort. Berber.* the *Fol. Centaur. Hyper. Croci?* Is it not from the ſame *Experience*, that we obſerve *Acids* alſo, at ſome times, very prevalent in bridling the exorbitant Bile. Likewiſe *Lixivials*, particularly the *Sapo-Caſtil. ſive venet.* than which there is certainly no better Remedy: Not forgetting *Chalybiats in puris Naturalibus*, or the *mineral Waters* therewith impregnated: the *Expreſſion* of the *Millepeds*, with ſundry others; and is not this Knowledge ſurely, theſe *Obſervations*, and theſe *Experiments* ſufficient to diſtinguiſh a *rational Phyſician* from a *Quack*, *Midwife*, or a *Country*

try Farmer, unleſs the Knowledge of *Windmills*, *Water-works*, *Gageing*, *Meaſuring*, *Numbers*, *Attraction*, *Repulſion*, *Specific Gravity*, and what not, muſt be added to the ſame? Or does this Gentleman believe, that without theſe *Obſervations* and *Experiments*, he can cure a *Jaundice* better by the help of his *Arithmetic*, his *Algebra* or *geometrical Diagrams*? Much leſs I am ſure will he be able to do this in *Fevers*, where *Obſervation* only, and *Experience* can aſſiſt us; no Diſſection here, nor *Mechaniſm*, I fear (whatever he pretends to) will avail, where all is tranſacted by imperceptible Cauſes; nor can we come at the Knowledge of Effects, till they are produced or brought into Act: How then is *Nature* to be aſſiſted, having no *Præcognita*, but from *Experience* and a diligent Attendance upon her Motions.

Parent *Nature* (ſaith Dr. *Sydenham*) accompliſhes the Generation of all Things, which at any time ſhe brings to light out of the Boſom of imperceptible Cauſes, by moſt certain Rules known only to herſelf, hiding their Eſſences or conſtitutive Differences in the greateſt Obſcurity. Hence every *Species* of Diſeaſes,

Diſeaſes, no leſs than of *Animals* and *Vegetables*, is always allotted affections peculiar to itſelf, and univocal, flowing from the ſame Eſſence: And yet the queſtion notwithſtanding will not be ſo conſiderable as it appears, *viz.* how we ſhould cure Diſeaſes, whilſt we know not their Cauſes? For that the Cure of moſt of them *(particularly give me leave to ſay Fevers and Cephalic ones)* is perform'd, not by the Knowledge of their primitive Cauſes, but by a proper Method found out by *Experience*, and confirm'd by *Obſervation*.

But why ſhould I uſe farther Arguments, when you may ſee from what immediately follows the foregoing Flouriſh, he is forced to give up all, and to come into our Meaſures. For *

'Such (ſaith he) is the inimitable Contrivance diſcover'd in the Structure and Conſtitution of an *animal Machine*, that more 'Fevers are prevented and reſtrain'd by the 'care and Providence of *Nature*, than are 'ever cured by *Phyſicians*: And ſince ſhe 'is the original Standard and *Archetype* of

* Ibid. p. 214.

'*Art*,

'*Art*, there is no need of any Thing elſe 'for the Information and Inſtruction of a 'good *Phyſician*, how to proceed in theſe 'Caſes, but only to obſerve the Meaſures of '*Nature*: How ſhe obtains her End, when 'ſhe is not ſomehow or other prevented, 'hinder'd and obſtructed in her Work.

'Again, tho' it is plain, that *Fevers* may 'ariſe as well from *Repletion*, which is the 'Cauſe of the greater Part, as *Inanition*, yet 'are they very much miſtaken who think 'the Cure conſiſts therefore chiefly in *De-*'*pletion* or *Evacuation*: Or who ſet about 'this Work at any time, without regard to 'Nature's Conduct: And indeed it is a Thing 'of the greateſt Conſequence, carefully to 'obſerve and trace the ſeveral Steps and Gra-'dations of *Nature*, under any particular ſort 'of *Fever*, in thoſe who recover, without 'Aſſiſtance from Art; and this I ſhall ven-'ture to ſay, that no Phyſician can ſtand up-'on good Ground, as to the Method he is 'to take, or the Succours he is to afford in 'the cure of any *Fever*, till he has diligent-'ly obſerv'd and inform'd himſelf, how Na-

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'ture cures the ſame *Fever*, when ſhe does 'the Work of herſelf.

'Farther, the word *Cauſe*, as apply'd to '*Diſeaſes*, is ſometimes taken for the *antece-*'*dent* Occaſions, by which they are brought 'on, ſuch *as an overheating, taking Cold, bad* '*Air, Diet, immoderate Evacuations, violent* '*Paſſions, or any Exceſs in the Non-naturals*; 'all which may help a Phyſician to form a 'right Judgment, concerning the original 'morbid Conſtitution, or the Diſeaſe it-'ſelf; but as the ſame antecedent occaſional 'Cauſes, produce different Effects at different 'Times, and in different Conſtitutions; ſo 'tis the Symptoms alone, or ſenſible Appear-'ance of the Diſeaſe, that can certainly be 'depended on in this Caſe: And which be-'ing thus known and found out by the 'Symptoms, with the conſequent Indications 'of Cure, the next Enquiry is after the Re-'medy, or ſuch Medicines as will moſt ef-'fectually anſwer the ſame general Indications: 'And this is what can be only known by '*Experience*, and can never be obtain'd by 'any Method of *Reaſoning a Priore:* No 'chymical Tortures, microſcopical Inſpec-

'tions,

'tions, or other Methods of Trial, without 'Experience, could ever have inform'd us of 'the Powers and Properties of Medicines, or 'what Effects they will produce within us.

Laſtly, to ſum up all, we find him arriv'd to this Acknowledgment *; 'Where we 'cannot come at the neceſſary Data *(our pre-ſent Caſe)* Philoſophiſing is trifling *(and Ma-thematiſing alſo)* and they who in ſuch Caſes, 'affect Eloquence and Oſtentation, may a-'muſe and ſurpriſe the Vulgar *(theſe are his own Words)* while they will certainly ex-'poſe themſelves to the juſt Ridicule and Con-'tempt of the truly Learned *(as have done 'moſt of our mechanic Smatterers this way.)* 'Since the Powers and Properties of Medi-'cines, or the Effects they are capable of pro-'ducing within us, can be only known by 'Experience, a faithful Account of which, 'grounded upon juſt *Obſervation*, and a long 'continued impartial Trial *(the Things we 'accord with and contend for)* muſt certainly 'be Matters of the greateſt Conſequence; and 'if any one demands the Reaſon hereof *(viz.*

* *Idem* in his Preface to his Philoſophical Principles.

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'the Operation of Medicines) I muſt own 'that I know nothing of it, but from *Expe-* 'rience, which plainly evinces the Matter to 'be ſo in fact.

To the like Purpoſe, we find another of the ſame Claſs *, after the recital of many Words, under the ſpecious ſhew of Argument, concludes thus in the whole.

'So far as a Perſon can conſider a human 'Body as a *Machine*, and by the known 'Laws of Motion, demonſtrate the Powers 'and Operations of its ſeveral Parts, *(how far 'this will reach let others judge)* ſo far may he 'with certainty know how to manage it, in 'order to produce any Change therein; that 'is, if he has proper Inſtruments, and upon 'the ſame Principles underſtands their Effi- 'cacy, and manner of Application; *(a great 'Difficulty this)* a large Number indeed of the 'Inſtruments by which it is either injur'd 'or mended, are ſo ſmall as to render it im- 'poſſible, with ſtrict certainty to determine 'their Efficacy, becauſe it is not poſſible ex- 'actly to aſſign their Bulk, Figure and Mo- 'tions;

* *Quincy* in his Introduction to his *Sanctorius*.

tions; and therefore cannot their manner of working upon the *animal Fluids* be poſitively known: the Seat of the Diſorder may alſo, at ſome times, lye ſo many Stages from the firſt taking in of a Medicine, that if at its firſt entrance into the Stomach, its Properties were never ſo certainly known; yet by the Actions of the ſeveral Parts upon it, which it paſſes through, and the different Mixtures and Strainers it meets with, by that Time it gets to the ſcene of Action, its firſt Properties may be quite deſtroy'd, and new ones aquir'd, the Efficacy of which, after ſo many Changes, can never be determin'd.

From all which, I think, Sir, you may plainly ſee how little Reſpect, in ſome Caſes, is to be paid to *Theorems* or *Propoſitions* of this *Kind*: Which tho' never ſo true in themſelves, in regard to certain Portions of Matter, under a diverſe Modification, or conſtituting ſpecifically this, or the other particular Diſtemper, or Diſorder in the *animal Machine*; yet will our Knowledge in the rectifying thereof be little advanced thereby, eſpecially in thoſe where we have nothing

but *Obſervation* and *Experience* that can avail us.

'*Experience*, give me leave to ſay, in the 'Words of an honeſt Practitioner *, which 'is our ſureſt, if not only Guide, by whoſe 'Laws and Rules, unleſs Phyſick be exerciſed, 'it were better there was no ſuch Thing: 'For the Life of Man is too much trifled 'with, when on this Hand, *Empirics* that 'are ignorant of the Hiſtory of Diſeaſes, and 'the Method of Cure, ſet up only with Re'ceipts: And on the other, vain *Tatlers*, that 'place all their hope in *Speculations*, by which 'more People are deſtroy'd than would, if 'left to themſelves, or Nature's Guidance; 'but that is Practice, and that alone will 'help the Sick, which draws its curative In'dications from the very *Phænomena* of the 'Diſeaſes, and confirms them by the ſame '*Experience*, by which the great *Hippocrates* 'obtain'd his height: For indeed without '*practical Obſervation*, that which ſeems at 'firſt very reaſonable, may perchance prove 'nothing elſe than the ſhadow of Reaſon, or a

* *Sydenham.*

'*Phan-*

'*Phantome*, that is mere Opinion, and the 'oftner *(ſays the good Man)* I converſe with 'others, I am the more confirm'd how dan-'gerous it is, even for the moſt acute, to 'rack their Brains in the ſearch of any Art or '*Science*, unleſs they conſtitute *Matter of Fact*, 'as Judge and Empire of *Truth* and *Falſe-'hood.*'

'I mean ſuch as follow from Things done 'and from thoſe Obſervations only, which 'practical and natural Appearances ſuggeſt, 'for theſe will remain firm and unſhaken, ſo 'that tho' the Practice of Phyſic, if you re-'ſpect the Order of Writing, may ſeem to 'ariſe from *Hypotheſes*, yet when ſolid and 'genuine, they muſt owe their Original to 'Practice.

'For Example ſake, in *Hyſteric* Diſeaſes, 'I do not therefore uſe *Chalybiats* and other 'Things that invigorate the Blood, forbear-'ing thoſe which evacuate, unleſs upon ſome 'Occaſions, but rather *Paregorics*; becauſe 'I firſt took it for granted, that the Diſeaſe 'proceeded from the Animal Spirits weaken'd 'and broken: But when the conſtant Ob-'ſervation of practical Appearances, had

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'taught me that the giving of purging Medicines, always increas'd the Symptoms, and that Things contrary were wont to quiet the ſame, I took, I ſay, my *Hypotheſis* from this and the other Obſervation of the natural *Phænomena*; ſo that the *Philoſopher*, muſt here ſerve the *Empiric*; whereas, had I began with an *Hypotheſis*, I had been equally as wiſe as he who goes about to build his Houſe without firſt laying a Foundation.

'Nor is it enough (ſaith he) that we publiſh particular Succeſſes either of any Method or Remedy, if neither the one nor the other has been found to obtain univerſally, the Circumſtances every way rightly conſider'd: for we ought as certainly to know that this or that Diſeaſe may be cur'd if we anſwer this or that Intention, as we do that this or the other Remedy will anſwer this or that Intention, which from *Experience* we have obſerv'd, at leaſt for the greater part, has ſo anſwer'd.

To the ſame Purpoſe alſo hear *Baglivi*.

'I obſerve it neceſſary to do this or that 'from *Experience* only, which has confirm'd

'this or the other Method to have ſucceeded 'beſt; for Inſtance, that in the Beginning 'of *Fevers* we muſt not purge, ſince no 'wholeſome *Criſis* is of a ſudden, or the 'Matter as yet fitted for Evacuation; the 'like of ſweating Remedies, too early ad-'miniſter'd, unleſs we were ſo happy as to 'be Maſters of ſuch (which alſo muſt be 'found by *Experience*) that at once were able 'to ſtifle the Diſeaſe, as the *Bark* does the '*Intermittent*, and the ſame found alſo to 'anſwer, after many repeated Trials *.

I would now hope, Sir, if not from my own Opinion, from what I have here collected of others, you may be convinc'd that every practical Phyſician is to take pure *Nature* for his Guide, or that he muſt be exceeding careful in his Obſervations of her ſeveral Diſpoſitions and Tendencies, as alſo of the Succeſs formerly of his own Endeavours, to promote ſuch as ſeem moſt likely to relieve her, and to check thoſe which are exorbitant, or by which ſhe is in Danger of being overſet.

* *Baglivi*'s Practice of Phyſick, p. 329.

Theſe, I ſay, muſt be the *Principles* he muſt go upon in ſuch Caſes, eſpecially where he can obtain no better (which are thoſe doubtleſs of *Fevers)* or more certain on which to rely.

Nor do I mean hereby or from any thing I have ſaid, that it is not proper for a Phyſician to ſtudy *Mathematics* or *Mechanics*, by which his Judgment, in the Solution of medical Problems, may be better'd, or that he may ſatisfy himſelf by the ſame *Principles*, how ſuch or ſuch Appearances in the human Body are brought about, and reconcilable to the ſettled Laws eſtabliſh'd by its Maker; but that he preſume not to make any ſuch *phyſical Problems* or Deductions the Rule of his Preſcription, in ſuch Diſorders thereof, as thro' their inſcrutable Properties, however *mechanically* tranſacted by *Nature* herſelf, together with his limited Underſtanding, unable to unravel them, are incapable thereof; yet even here we may give him leave to talk *mechanically*, provided he practiſe by *Obſervation* and a well-grounded *Experience*.

For did we rightly conſider the Importance of Men's Lives, with which we are entruſt-

ed, we ſhould not ſurely put the ſame upon the moſt uncertain *Calculus* of *Numbers* or *mathematic Theorems*, how curiouſly ſoever wrought by a philoſophic Brain; neither yet upon any *Propoſitions* or *Diagrams*, which oftentimes have no other Baſis than meer *Hypotheſis*; nor (as is the Cuſtom of ſome who are always in haſte when they ſhould be moſt at leiſure) call for the Pen and Ink, and write, as we ſay, off hand: But deliberate thoroughly upon each Caſe, and reflecting what we have obſerved of the like, at leaſt ſo far as Compariſon may allow, propoſe our Remedy, diverſifying however as Variation in Circumſtances, or ſome differing Indications may require; for believe me, unleſs you do ſo, whatever others may aſſert of the Inſufficiency of *Obſervation*, without *mathematical* Acquirements, I will be bold to ſay, the poor Patient runs a greater Riſque of his Life, and is at more Uncertainty under the Direction of his *Mechanician*, than that of the leſs accompliſh'd this Way, but more heedfully obſerving and experienc'd Practitioner: And I cannot but agree ſo far in the ſame Sentiment of a once eminent Gentleman of the Profeſſion,

ſion *, that a *Genius* well adapted, with a competent Knowledge of the learned Tongues, and a thorough Acquaintance with the *Hiſtory of Diſeaſes*, from a conſtant and full Practice, will make a more ſafe and uſeful Phyſician, than a Head fill'd with philoſophical *Axioms*, or *mechanical Theorems*, will be able to produce.

One of the laſt of theſe I have ſeen, ere now, at a Stand by the Bed-ſide of the Sick, through the Want of ſuch *Obſervation* in the Diſtemper, unable to foreſee, with the Help of all his *Algebraic* Acquirements, a fatal *Criſis* of a *Fever* juſt at hand, predicted by the Nurſe, and quickly after confirm'd.

How vainly then do ſome of theſe inculcate to their Pupils, that the *Moments of a Fluid are a Rectangle under the Quantity of Matter, and the preſſing Velocity*; or *that Moments are equal to a Rectangle under the Celerity and Quantity of Matter, at a Time when they ought to be appris'd that the Matter of* greateſt *Moment*, and indeed the Fundamental, is to have the chief Regard to the preſent

* Sir *R—— ood B——r.*

Appearances and *Indications*; or laying aside all *Theorems* to direct such Remedies, as upon their own constant *Observation* and repeated *Experiments*, they have found to answer the said *Indications*.

For alas! what avails our Knowledge here, *that Fluids gravitate with a lateral Pressure, perpendicular to the Tangent of the Circle; that the Center of Gravity is a perpend to the incumbent Weight?* If whilst we are busied about these Fooleries (for they are no other at these Times) we overlook the weightiest Affair of all; or unless by *Tangents* and *Diagrams*, we could save a dying Patient, which is now only attainable by proper *Cordials*, or other *Alexipharmics*, such as a languishing Pulse dictates, and oppress'd Nature calls for; and if our Minds are otherwise employ'd now, what do we else but sacrifice our Fellow-Citizens to *Numbers* or *Quantities*, perhaps mistaken by a wrong *Calculus*, or if true, yet foreign to our Purpose? What do we, I say, other than suffer our Patient to die, not so much according to *Art*, as *learned Nonsense*; and then who knows not the *Center* of his *Gravity* to be the Grave? or indeed in what better

better condition is he, if under this Management, than was their great Maſter *Archimedes*, who whilſt he was intent upon his *Circles* and *Diagrams*, was knock'd on the Head by a common Soldier, whom otherwiſe he had eſcaped?

You will think, ſurely by this time, I have ſaid enough to convince any conſiderate Perſon, that however theſe Qualifications, I mean *mechanical*, may help in the Explication of certain *Phænomena* in human Bodies, whether healthful or diſeaſed, with more Satisfaction than by other Principles can be obtain'd; yet with Regard to our preſent Diſſertation, *i. e.* about *Fevers*, they will ſtand him in little Service; I wiſh I could ſay they might be found certain in many others; for notwithſtanding they promiſe great Matters, I find few Advances among their Owners, either in the Way of *Propoſition*, *Axiom*, *Problem* or *Theorem*, in which they are all rightly agreed one with another, or in which ſome have not oppos'd the reſt. If you will give yourſelf the Trouble to peruſe that elaborate Performance of *Michellotus* *, you will find

* De Secretione Fluidorum.

what I here alledge, to be verify'd in an hundred Places; but it is time I ſhould now have done with this part of my Subject, intended chiefly to convince you, that as you ever expect to be a ſucceſsful Practitioner, not a *talking Phyſician*, you muſt have a conſtant and careful Eye to Practice. I mean, having ſufficiently inform'd yourſelf, of the Structure and Uſe of the Parts in human Bodies, both ſound and diſeaſed, you are then by diligent *Obſervation* to collect ſuch a Number of *diagnoſtic* Signs, as may give you a juſt and true Inſight into the Nature of the Diſeaſe, ſuch as may enable you to diſtinguiſh the ſame from others, how like ſoever in ſome common Appearances: Among them (where you can come at them) thoſe eſpecially which are *pathognomonic*, are of greateſt Advantage: And when by a Series of theſe carefully collected from the Writings of the Antients, as well as practical modern Authors, ſuch for Inſtance, of the latter Sort, as the judicious and learned *Riverius*, and the faithful *Sydenham*, more particularly verify'd by your own Obſervations, being beforehand as thoroughly acquainted with the *Materia Medica*, having

ing hereby found out your Diſeaſe, you are then to direct the Remedy; ſuch as you have alſo obſerv'd to have been recommended by the ſame or others the like honeſt Practitioners in the Caſe, and as your own Experience thereof ſhall after farther encourage.

During this, I think it expedient you make ſome ſhort *Memoirs* of the Succeſs from time to time, carefully noting every new or unuſual Accident, which ſeem'd to fruſtrate your Endeavours, or perplex your Judgment in the Caſe, and minuting them down in like manner.

For as the Author * we have often quoted, has juſtly taken Notice, a Phyſician may as certainly take his curative Indications from the ſmalleſt Circumſtances of the Diſeaſe, as he does his *Diagnoſtics*: And had we once an exact *Hiſtory of Diſeaſes*, we ſhould never be at a loſs for Remedies ſuitable to them. The various *Phænomena* plainly ſhewing the Way in which we ſhould at all times proceed, and which if carefully compared one with the other, would lead us to thoſe obvious In-

* Dr. *Sydenham.*

dications

dications which are taken truly from *Nature*, and not from the Errors of Mens fancies.

But after a ſufficient Collection of theſe, whether made to your Hand by others, or of your own, which carry with them the greateſt Satisfaction, together with their Events, you are to found your *Prognoſtics*, that truly noble and advantageous part of the Profeſſion, and by which an almoſt equal Honour, when rightly form'd and accordingly fulfill'd, accrues, as by the Cure, which of itſelf diſtinguiſheth you ſufficiently from a *Quack*, and will ſtand you in greater Uſe, than all the philoſophical Niceties of which you can make yourſelf a Maſter.

As a help to this, your frequently diſſecting Bodies defunct by Means of the ſame Diſeaſe, will ſometimes afford much Inſight, and confirm a well grounded *medical Preſage*: Nor need you other *Principles* to go upon, or Baſis on which to build, than the ſame cloſe Attention upon *Experiments* and a rational Practice, furniſh'd by a full Employment; till then, you are to make uſe of that of others, and which, as *Helvetius* takes Notice, is the only way to improve in this Profeſſion

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of Phyſick: 'Tis this indeed, as that great Man farther obſerves, that with a large Stock of *Prudence*, and a larger of *Probity*, will furniſh ſuch a Phyſician, as may be able to diſcharge, with a good Conſcience, the Duties requir'd of him.

This Gentleman, 'tis true, as well as certain others, tell us now that a Method muſt be obſerved, even in our *Obſervations*, which are therefore to be reduced to ſome Rule; having always an Eye to thoſe immutable Laws, by which Nature has regulated the *Mechaniſm* of human Bodies *.

As if we thought that *Reaſon* was to be excluded from our *Obſervations*, without which they muſt be lame and imperfect: Or as if one who could *reaſon* rightly about the ſame, and was truly expert in making them, was not the fitteſt Perſon to reduce the various *Specifications*, or different Appearances of the ſame Diſeaſes, ſo far as poſſible, to their proper Claſs, any more than the *Botaniſt*, the ſeveral Simples of the ſame general Denomination, to their peculiar Tribes unto which they belong.

* Eſſay on the *Animal Oeconomy*.

Miſtake

Miſtake me not then, dear Sir, ſo far as to think I would have you lay your *Reaſon* aſide, at a time when you will want it moſt, by taking care that your Remarks are juſt, upon Nature's ſeveral Motions, that your Inferences are rightly drawn, and that by Means of ſome Complication in the Diſtemper, you are not deceived.

Our Friend *Baglivi* will inform you *, that the chief Pillars of Phyſick are *Reaſon* and *Obſervation*, and that the latter is the Thread to which the former is to point: For as *Nature* is the ſame, ſo every Diſeaſe afflicting her, has its certain and peculiar Mode, both at its firſt Onſet, as well as at the time of its Increaſe and Declenſion. Now all theſe being brought about independently of the human Mind, ſo in tracing their *Nature*, we have not ſo much Occaſion for a ſubtil or diſguiſed way of Diſputation concerning her Operations, ſo much as a repeated and ſedulous Obſervation of what befalls the ſick Perſon, which, as *Sydenham* (whoſe Words theſe are) has before taken Notice, requires neither *algebraical* nor *geometrical* Knowledge, but

* Practice of Phyſick.

only

only ſuch Acuteneſs of Underſtanding, as is conformable and obedient to Nature's Meaſures, and to her Inſtructions.

'It was *Neceſſity*, ſaith the former, that 'gave Being to *Phyſick*, but *Experience* that 'brought it to Perfection: In its Infancy it 'was groſs and ſtupid; yet in progreſs of 'Time, by the daily Acceſſion of new *Ob-'ſervations* mutually illuſtrating each other, 'and eſpecially by the Light of *Reaſon*, 'guiding and over-ruling all, it became a '*liberal* and learned Art.

And thus you ſee how theſe are to go Hand in Hand, for whoſe better Illuſtration, take here the enſuing Caſe, in which myſelf was concern'd.

When a raw Practitioner, being ſent for to a Perſon labouring under a very acute Pain on the Side, I cauſed him preſently to be let Blood, which I knew by the Approbation of all, was the prime Remedy: Afterwards I directed (as cuſtomary alſo) *oily Draughts*, *Sperma Ceti Boles*, with a *pectoral Decoction*; the Complaint continuing, I repeated Bleeding, but without Advantage. On the third Day, a Perſon of more Experience, and a

ſounder

founder Judgment was call'd, who preſently taking the Caſe, which I had miſtaken, order'd a *volatile* Draught, with one Grain of *Opium*, which with a few Spoonfuls of a *carminative* Mixture between whiles, immediately remov'd the Illneſs; whence I was to my Diſcredit convinc'd, there was occaſion both to obſerve, and to reaſon alſo: For had I, as a prudent and experienc'd Man, taken Notice, that inſtead of a hard and high Pulſe, we had one that was low and depreſt; in the Place of an inflammatory Urine, or a fizy Blood, the former crude and pale, the other florid; nor did my Patient cry out more at a time of Coughing or deep Breathing than at another; Symptoms all different from what happens in the genuine *Pleuriſy*; I might have known this Caſe was only *ſpaſmodic*, or purely flatulent, and that in vain were all my Endeavours, treating the ſame as an Inflammation, which in few Minutes I might have taken off, and ſaved my Patient's Blood, for which I had been anſwerable, had he miſcarry'd thereby, or had not a more expert Practitioner ſtep'd in to ranſom him.

I have inſtanced the rather in this Caſe,

there being none more common than ſuch *Spaſms* or Cramp-like Complaints, upon the nervous and membranous Parts of the Body, alſo frequently on thoſe of the Trunk or Cheſt, imitating both *Peripneumony* and *Pleuriſy*: In which neither Bleeding nor Expectorants, however ſerviceable in the true Affections of that Kind, are other than deluſory and trifling: And where nothing takes off the Complaint like an Opiate, proportionate to the Degree thereof, together with the *Sal C. C. Vol.* or its Spirit *per ſe deſtil.* which I have found much more ſerviceable on theſe Occaſions than in the inflammatory Caſes, tho' here alſo it is cuſtomary to give them; neither muſt the Lowneſs of the Pulſe at all Times, which is the Effect of the Pain ariſing from the *Spaſm*, hinder the giving a ſuitable Anodyne unleſs forbid by ſome Diſorder in the reſpiratory Organs; as in *Dyſpnœa's* from pituitous Infarctions of the *Bronchiæ*, or other Obſtructions, which will riſe again immediately upon removal of the Pain.

To conclude: As the Deſign of the foregoing was to caution you from taking any curative Indications from *Hypotheſes* or *Theories*

of

of any Kind, which correſpond not with *Obſervation*, or are contraindicated by the Touchſtone of *Experience*. So on the other, to perſuade the uſe of *Reaſon* in forming your *Obſervations*, and reducing them to ſuch Method, that upon Occaſion, having recourſe thereto, you may readily find out the *Diſeaſe*, with the *Method*, which from a preceding Succeſs under the ſame Appearance, had proved ſerviceable: Nor by any Thing I have ſaid, would I have it ſuppoſed, that you are ſo ty'd down to ſimple *Experiment*, but that wherever there is room for it, you may alſo argue thereupon, as well in regard to the Diſeaſe you encounter, as the *Modus* of Operation, whereby the Remedy ſubdues the ſame: Which yet in Fevers, particularly of the nervous Kind, (the Subject chiefly of our preſent Diſcourſe) is not, I think, to much Purpoſe: However ſhould you at any Time hereafter ſee Cauſe to believe otherwiſe, I would enjoin you, if I could, for your Patient's Advantage, firſt to cure him by *Obſervation*, as Nature, not buſy Art chalks out the Way, and that too by the moſt ſimple Medicines *Experience* dictates, when if you pleaſe, from what

Hypo-

Hypotheſis, you will, either *Phyſical* or *Mechanical*, you may explain the Proceſs: I cannot perſuade myſelf you will think this a *Poſtulate* unreaſonable, for in thoſe Caſes, where we can only argue truly or rightly, unleſs *à poſteriori*, or that all we offer *à parte antè*, will be deemed no other than a *gratis Dictum*, it is now ſoon enough to begin our Reaſoning, *ex poſt factis*, which whether or no ſatisfactory to Conviction, is ſure to be attended with this Advantage above the other, that it will not hurt your Patient, however it may affect your own Judgment and Reputation.

I am too well appriſed of your Candour, to doubt your taking all in good Part, being very ſenſible, that if any Thing I here offer, may prove inſtructive to others under the ſame Cover, it will be equally ſatisfactory to yourſelf, as to,

SIR,

Your Friend, and very

Ex Muſæo Die 25 Martij 1727.

Humble Servant.

THE SECOND LETTER TO A YOUNG PHYSICIAN,

Directing his Regimen for the Cure, and his Conduct to the Sick.

Medio tutissimus ibis. Ovid.

Dear Doctor,

IN my former, having advis'd you to truſt to no *Hypotheſes* or *Theories*, in your Attendance upon *Fevers*; or borrowing thence any *curative Indications*, which can be of no Advantage to your Patient, any farther than ſupported by *Obſervation*, or confirm'd by *Experience*: I ſhall in this take Occaſion

caſion to deliver my Thoughts with the like Freedom concerning the *Regimen*, I mean the *Medicinal*, moſt ſuitable to the various Kinds thereof; ſuch as I have obſerved moſt available, and by which you may run the leaſt hazard of your Patient's Life, as well as your own Credit, when other Gentlemen, if of Probity equal to their Learning, ſhall happen to be call'd in upon you.

But before I enter upon this, I will here give you ſome general Definitions of the Diſeaſe, as well as touch upon the Subdiviſions thereof.

Firſt, I obſerve Diſputes, as to the very *Eſſence* of a Fever, among the *Mechanicians* themſelves! Thus

A Fever, according to Dr. *Pitcairn* *, is nothing more than an increaſed *Velocity* of the Blood's Motion, to which another of the ſame Form † anſwers, that it is firſt of all a great Miſtake in thoſe who judge of the *Velocity* of the Blood, by the frequency or quickneſs of the Pulſe; as if a quick Pulſe always indicated an increaſed *Velocity*. And

* Elements of Phyſick.

† *Morgan* in his Philoſophical Principles.

2dly, a greater, to define a Fever by an increaſed *Velocity* of the Blood: For nothing is more manifeſt to Experience than this, that the *Velocity* of the Blood may be encreaſed extremely without a *Fever*, as upon violent Motion, hard Drinking, or the like; and on the contrary, its *Velocity* is oftentimes diminiſh'd, as appears from the great Weakneſs of the Pulſe in the worſt of Fevers. 'So 'that a Fever with this Gentleman, conſiſts 'in a preternatural Heat and Rarefaction of 'the Blood, attended with Inflammation, 'Dilatation of the Blood Veſſels, and a con-'ſequent Compreſſure and *Obſtipation (for 'you know theſe People delight in odd Words)* 'of the *Lymphaticks* and *glandular Strainers:* 'And according to the different Degree and 'Quantity of theſe Cauſes, there will parti-'cular *Fevers* ariſe, of a higher or lower 'Rank, and whoſe Symptoms will be more 'or leſs numerous, grievous and threatning, 'in proportion to the Degree of Force, and 'particular determination of theſe general 'Cauſes: And therefore it is plainly impoſ-'ſible in his Opinion, and the Attempt per-'fectly chimerical, to reduce Fevers to any

'certain

'certain and determinate Number, under 'proper and ſpecific Names, ſo as to ex- 'clude any new Forms or Appearances; ſuch 'as might give Occaſion for ſome other Spe- 'cification: For from the different Degrees 'of Quantity and Rarefaction, Inflammation 'and Obſtruction, in Fevers, the different 'irregular Flux and Determination of the 'Blood and other Animal Fluids, in particu- 'lar Caſes, innumerable Symptoms may a- 'riſe, ſome new ones every Day, which had 'not been obſerv'd before.'

Bellini's Opinion of Fevers we have already laid down in our former.

A late Writer upon the ſame Subject *, who has taken many *Axioms* from him, acquaints us, *that an unuſual or preternatural heat, along with a frequency or quickneſs of Pulſe, denotes a Fever*; but this is liable to the ſame Objection as the former, ſince whatever quickens the Pulſe, will bring on Heat, as we have inſtanced in Perſons quickening their Pace to make themſelves warm, and as in the Caſe of drinking over much ſtrong Li-

* Criticon Febrium by Dr. *Strother*.

quors: But the ſame Perſon doth acknowledge *that the frequency of the Pulſe alone does not conſtitute the Eſſence of a Fever, till it degenerates into a Celerity*, nor ſurely then, if there be no other Attendant.

The excellent *Boerhaave* is more full in his Explication *; for tho' with the reſt, he tells us, whatever a Phyſician can diſcover of a *Fever*, is to be found by the quick Pulſe, which hath for its Cauſe a quicker Contraction of the Heart, owing to the reciprocal Influx of the *Liquidum Nervoſum*, with greater frequency than at other Times, diſpenſed to the Muſcles and to the Cavities of the ſame Part, from whoſe irregular Influx, the Pulſe will ſometimes vary, as ſlower, faſter, or intermitting: But then to difference this Velocity in Fevers, from that which may ariſe upon other Occaſions, he ſays farther, that it muſt be attended at its firſt Onſet with a *Chill*, a *Rigour* or a *Tremor*, after which enſues the Heat, greater or leſs, of longer or ſhorter Durance, according to the Nature of the *Fever*; for as theſe are more

* Aphoriſmi de Febribus.

or leſs vehement, there will ariſe either the *acute* or the *ſlow* Fever, but in every one, proceeding from an inward Cauſe, there muſt be the *Horripulatio*, as well as the *Pulſus velox & celer, inſecuta*.

It were both needleſs and uſeleſs to enter farther upon the Definition of a Diſeaſe, with whoſe real Nature we are ſo little acquainted, and therefore very prudently hath *Helvetius* * fallen upon the ſureſt Method, where he informs his Reader that a *Fever*, as other acute Diſeaſes, is better deſcrib'd than defin'd. Thus when we ſee a Perſon ſeiz'd with a preternatural Heat, and quickneſs of his Pulſe, we are not to ſay that ſuch a Perſon is in a *Fever*, unleſs theſe Symptoms are accompany'd with ſome Diſorder in the natural Functions; for the Heat and quick Pulſe may happen without a *Fever*, as before obſerv'd.

In regard likewiſe to its *Eſſence*, ſo alſo to the Cauſe, there is variety of Opinions: *Bellini* and *Borelli*, the two principal of the *Mechanicians*, as we have before intimated,

* Eſſay on the Animal Oeconomy.

allow of nothing elſe than *Motion* and *Quantity* in the Blood, increaſed or diminiſh'd, with its Quality alter'd, one or all of them, but which or how, ſeems difficultly explain'd, ſo as to conduce to the Production of the ſeveral Species thereof. This is ſaid to be a very lucky Invention, as ſurely it muſt be granted, could the ſeveral Appearances therein be ſatisfactorily explain'd, without recurring to precarious *Hypotheſes*; or that we could thence take better *Indications* for the Cure, than from ſome others, who have placed the ſame *in a fermenting Matter, or a diſturbed Mixture of the Maſs, an Acrimony of the Juices breaking the Globules, and ſhedding a poiſonous Liquor thereinto*; contrary to which laſt I find the foreſaid Author delivering his Opinion, * *viz.*

'That all *Fevers* are cauſed by ſome groſs 'indigeſtible Humour, contain'd in the *Lymphæa* or Serum of the Blood, whilſt the *Globules* are unconcern'd, ſtagnating as it were 'in the *Lymphatic Veſſels.*

And according to the *Criticon*, 'the Maſs

* Idem ibidem.

'at theſe Times contains ſome unuſual Mix-
'ture of extraneous Qualities and Matter,
'which makes the Motion thereof irregular,
'and keeps it out of order, till the ſame is
'ſeparated therefrom: This is what gives
'riſe to all the Symptoms that in Fevers ſo
'grievouſly afflict our *Oeconomy*: And tho'
'*Bellini* doth aſſert there is nothing farther
'contain'd in the Blood, ſave its different
'*Quantities* of Matter, by which it fills the
'Veſſels to a certain Pitch, with its Degrees
'of *Velocity*, which are but the Reſult of the
'more or leſs active Qualities contain'd there-
'in; yet no Man can practically aſſure you,
'whether the bare increaſe of the *Velocity* of
'the Blood's Motion, may not rarify its
'Particles, and fill each Section of the Veſ-
'ſels in an equal Degree, as if the *Quantity*
'had been really encreaſed *.

Be this, however, as it will, and our Ignorance of the eſſential Cauſes of Fevers as great as it may be, that there is (as this Author rightly obſerves) ſomewhat foreign to *Nature*, got into the Blood at theſe Times,

* Criticon Febrium, p. 78.

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is beyond Controverſy, and evident ſurely by her *Luctus* or Striſe to get clear thereof; of which we have for Witneſſes our Senſes, When any poiſonous Drug is taken into the Body, occaſioning the like Diſturbance, as is rais'd frequently therein, by ſome malignant Fever, ſuch as Thirſt, dry and black Tongue, enormous Vomiting or Looſeneſs, ſhedding of the Hair, breaking out on the Skin, *&c.* with other deadly Symptoms, unleſs ſhe happens to get the Victory, in a hard Struggle for Life: Why then ſhould we doubt but that ſome noxious Particles ſhut in, that ought to have perſpir'd; or others entering from without, either inſpir'd along with a contaminated *Atmoſphere*, ſwallow'd with our Food, or finding any way Admittance, may not be able to raiſe an Effervescence or Perturbation of like Kind, to the endangering, if not ſubverting of the Animal Fabrick?

That this Liquor of the Blood is capable, and does naturally undergo a Sort of Fermentation, ſeems plainly deducible from the Heterogeneity of its Parts, I mean thoſe compoſing the ſame, *viz.* our Aliments; which in their Comminution, admixt with thoſe in

the Stomach, together with that of the *Salival* Juice convey'd along with them; and after entering the *Duodenum*, the *bilious* and *pancreatic*; being thus convey'd into the Maſs, by the Thoracic Duct, they cannot, I ſay, miſs fermenting and raiſing a Heat therein, which from a *natural* Degree may, by divers Cauſes (as in the Caſe of *Fevers*) become *preternatural*.

For, as *Helvetius* has pertinently noted *, 'the Blood has a threefold Motion, the one 'of Fluidity, common to other Liquors, the 'ſecond *protruſive* from the Impulſe of the 'Heart and Arteries, herein differing from 'thoſe; a third *fermentative*, or a Motion 'throughout of all its Parts; this (ſays he) 'I call *Inteſtine*, agreeable to all Fluids, un-'der a State of *Fermentation*, producing the 'various Humours of which it conſiſts, and 'giving warmth to all the Parts. The Mo-'tion of the Air is not the Principle of this 'Fluidity, which rather coagulates the ſame, 'as ſoon as expos'd thereto: This Quality 'is therefore owing to the Motion of the

* In his Eſſay,

'*Solids*,

'*Solids*, through which it paſſes, together 'with the fermentative Motion within itſelf. 'The protruſive Motion is then from the 'Heart and the ſolid Parts, the fermentative 'from its own diſſimilar ones; for being a 'Compound made up of various Particles, it 'cannot fail of containing thoſe which are 'capable of *Fermentation*, when ſuch Par-'ticles occur, by Reaſon of the Colluctation 'thence ariſing, together with the violent 'Commotion thereof.

'In vain is this deny'd which is ſo mani-'feſt, ſuch as the Heat thereby ariſing, and 'communicated throughout the Body, the 'Fermentation of the *Bile*, *Saliva*, and other 'Humours, with their Power of Rarifaction, 'which can only ariſe from this inward Mo-'tion of the ſeveral Particles; call it *Effer-'veſcence*, *Ebullition*, or what you pleaſe, we 'ſhall call it *Fermentation*; and that a *Fever* 'is to be no otherwiſe conſider'd than a Diſ-'eaſe ariſing from ſome unuſual *Ferment*, 'ſtirred up among the Humours of the 'Blood, diſturbing both thoſe natural Mo-'tions and Functions of the Body, taking 'riſe from ſeveral Cauſes, as the cold Air, a

'Debauch in eating and drinking; whereby 'ſome Parts of the Aliment or Liquors taken 'down, being hindred from perſpiring, or 'unduly retained in the Blood, will give a 'quick and large Acceſſion to ſuch as are 'diſpoſed to ferment; and whence will 'come on a briſker *Fermentation*, that is a '*Fever*.

And this, Sir, I think, is farther manifeſt, by what we call the *Criſis* thereof, which is nothing more than the ſame Fermentation finiſh'd, when the Blood, now as it were deſpum'd (after the Manner of other Liquors under that State, ſome of which require a longer, others a ſhorter Space for the ſame) the Striſe ceaſeth, if Nature gets the better; and the Maſs by degrees recovering its former Condition, Health is again reſtored; otherwiſe being unable to accompliſh the Work, ſhe is forced to ſink down under the Conflict.

Let this now ſuffice, as to the general Cauſe and *diagnoſtic* Signs of Fevers, the *Prognoſtics* whereof muſt be gather'd from the Nature and Tendency of the Fever itſelf; as whether to the *benign* or *malign* Species, or complicate with Symptoms more or leſs formidable;

midable; of which farther in our Observations of the several Sorts of them.

In the *Division* of this Disease, we find also as great Variety as in the *Definitions*; that of the Antients was the *Synochus simplex ac putrida*, the *Causus* or *Ardent*, the *Hectic*, *Intermittent* and *Malignant*. The two first went under the Name of συνοχῆς, the last was denominated συνοχὸς: The former differing little otherwise than in its less or greater Heat and Continuance. The mildest or lowest Degree of all is term'd *Ephemera*, as ending in a Day; yet sometimes running out to greater Length, *viz.* two or three. Opposite to the *Causus* or burning Fever, is the *Colliquative*, when instead of the violent Heat ensue as extreme Sweats, in which the Sick is, as it were, instantly melted down, the Humours going off, either by the Pores of the Skin, or by some other profuse Evacuations, *viz.* Stool or Urine, as in the Diabetes; also the *Epiala utriusque Generis*, in one of which the internal Parts seem cold, whilst the external are hot; in the other the internal Parts are hot, whilst the external ones are cold. To the former also belong the com-

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mon *Inflammatory*, which from the Part affected, takes its Name of *Anginalis*, *Peripneumonica*, *Pleuritis*, and the like: To the latter are adjoin'd, by ſome, the *Eruptive*, ſuch as the *Variolous*, *Morbillous*, the *Eryſipelatous*, *Miliaris*, *Rubeolæ*, *Raſhy* and *Petechial*; tho' the three former, I think, ſhould more properly be number'd among thoſe of the *inflammatory* Claſs.

Others have differenced them only as *Remitting*, *Intermitting* and *Continual*; whilſt a modern Author * has farther confounded us with unheard of Terms of *Flatulent*, *Influent*, *Effluent*, *Inflatulent*, *Efflatulent*, *Influo-colliquative*, and *Efflua-colliquative*, with the like new Phraſes, minted in a Country Town; and with ſome other *Mathematical* Diſcoveries brought lately to us in *London*. Proceeding now,

'*Fevers*, ſaith *Helvetius* †, may be diſ-'tinguiſh'd as *Intermitting* and *Continual*; 'all of them are occaſion'd by ſome Altera-'tion in the Juices or Humours, with which 'the *Lympha* is clogg'd; and which are not

* *Morgan* in his Philoſophical Principles of Phyſick.
† Eſſay, p. 17.

'thrown

'thrown off all at once; Part of them 'unite with the *Lympha*, and are diſ-'charged into the *Primæ Viæ*, the Sto-'mach and Guts; where aſſembling, they 'tumultuate and corrupt the Aliment; after 'which being here diſingaged again, they are 'thrown into the Blood, and raiſe a *Fever*; 'when continuing to be diſſolved and diſ-'charged without *Intermiſſion*, the Fever is '*continual*: But when to unfold and expand 'themſelves, they require any ſtated Time, 'as ſeveral Hours or Days, they cauſe *inter-'mitting Fevers*, whether *Quotidian*, *Tertain*, 'or *Quartan*; the Difference depending on 'the Quality of the Humour, the Facility 'with which it diſingageth itſelf, and the 'Time it takes up to get clear of the *Lym-'pha*, and to paſs thro' the *Primæ Viæ*.

'Dr. *Pitcairn* has diſtinguiſh'd them as '*Legitimate* and *Illegitimate* *. A *Legiti-'mate* Fever makes its Onſet without any 'Senſe of Cold or Shaking, that is, when 'there is no other Diſeaſe accompanying.

'The *Illegitimate*, is when the Fever is at-

* See his Elements of Phyſick.

'tended

'tended with ſome other Diſeaſe, or if to an 'augmented *Velocity* of the Blood (by which 'you have heard he defines the Diſtemper in 'general) ſome other Fault therein, or in the '*Solids*, is alſo join'd, as a Lentor in the 'ſame, or ſome internal Ulcer; for then the 'Diſeaſe is not a ſimple Fever, but compli-'cated, or with an adjunct, which is to be 'conſider'd in the Cure: So that if the 'Cauſe producing a Fever, part of which 'alſo is an augmented *Velocity* of the Blood, 'produces a new Period, in any given Time, 'before the foregoing quite ceaſes, the Diſeaſe 'will be a *continued periodic Fever:* But if 'it does not produce a new Period, until a 'certain Time after the former has finiſh'd 'its Courſe, it is then call'd an *intermitting* 'Fever. In both therefore, whether a *con-'tinued Periodic*, or an *Intermittent*, accord-'ing to the Number of Hours between the 'Periods, it is *Quotidian*, a *Tertian*, or a *Quartan:* So that the Sum of all in this 'Gentleman's own Words is, that *a Fever 'is an equable Augmentation of the Blood's Cir-'culation, either remitting or intermitting.*

'Or a Fever *(according to the ſame)* may

'be otherwiſe diſtinguiſh'd, as already ob-
'ſerv'd, into an *Ephemera* of one or more
'Days, a *ſimple Synochus*, or a Fever from
'Rarifaction, a *putrid or continent one*, and a
'*Hectic*, which goes on uniformly, except-
'ing that the Pulſe and Heat are ſlightly
'rais'd after eating.

'All theſe *(ſaith he)* are *legitimate* and
'ſimple *Fevers* ſo call'd, conſiſting of many
'Periods, and free from *Remiſſions* and *Inter-*
'*miſſions*; nor do they in any Manner differ,
'*(if you can give Credit thereto)* than in the
'Degree of the *Velocity* in the Circulation of
'the Blood, and the conſequent Rarifaction
'and Heat, the Effect of both; the various
'Degrees of which produce Symptoms,
'which to the Unſkillful *(I wiſh they prove*
'*not ſo at ſome times to the more Skillful)* may
'ſeem to be very divers, or of another Kind.

The following, which for your greater Satisfaction, I have here inſerted, is taken from Profeſſor *Boerhaave* *, who informs his Pupils, 'that a *Fever* is always the Companion of ſome *Inflammation*, either *conti-*

* Aphoriſmi de Feb.

'*nual*,

'*nual, remitting* or intermitting; the moſt 'ſimple of the continual being on all Sides a-'greed to be the *Ephemera* or *Diaria*, ariſing 'from violent Exerciſe, or ſome Treſpaſs in 'the *Non-naturals*; particularly eating and 'drinking ſomething diſagreeable, which is 'to be remov'd by Reſt, Abſtinence and Di-'lution: If it holds longer than a Day, it 'is named a *continual imputrid Fever*, and 'then may ſtand in need of Bleeding 'and Refrigerants. The *Continual Putrid* or '*Synochus Putris*, ariſeth alſo from a ſimple 'Inflammation or Obſtruction of the Bowels, 'through the Perſpiration diſorder'd; this is 'diſcover'd by its pungent Heat, irregular 'Pulſe, thick high colour'd Urine, ſome-'times turbid, tho' at others crude, without 'a Sediment; and muſt be differently at-'tempted, according to Indications from the 'Variety of attending Symptoms, the Con-'dition of Life, and the Time or State of the 'Diſeaſe; and theſe are called *Continentes* ſive 'συνόχες, having no Remiſſion of their Heat: 'συνεχεῖις vero ſeu continuas appellantur, quæ 'continuæ ſunt remittentes.

The *Ardent*, called also *Causus*, is a distinct Species, ſo named from its intenſe Heat, great Thirſt, difficult Breathing with the dry Tongue, Anxiety, Reſtleſsneſs: Which may alſo befall thoſe who take long Journeys in hot Weather, or feed much upon acrid and ſpicy Foods, with ſtrong inflaming Liquors; this being one of the moſt acute Fevers we have, deſtroying the Patient often before the fourth Day, ſeldom holding out to the ſeventh.

It was the Cuſtom of the antient as well as modern Writers, to call every continent Fever by the Name of *Synochus*. If the ſame held only for a Day or two, as the *Ephemera*, it was then *Simplex* or *Synochus imputris*, when running longer out, *Synochus putris*, or a continual *putrid* Fever. Which Epithet I think is not always rightly appropriated: For ſhould we grant with the laſt mentioned Author, that every Fever is the Companion of ſome *Inflammation*, which may hold good of the *Sanguineous*, or thoſe which take riſe from ſome Treſpaſs in the *Non-naturals*, particularly the obſtructed Perſpiration: Yet I cannot think every *inflammatory Fever* has a

Title (ſtrictly ſpeaking) to the Name of a *putrid* One. The *Angina*, *Peripneumony*, and *Pleuriſy*, which are the higheſt inflammatory Fevers, are, properly ſpeaking, not yet become putrid, till an Abſceſs is form'd upon the Parts, when by reaſon of ſome purulent Particles mixing with the Blood in its Circulation, the ſame is then truly a *putrid Synochus*. Whilſt any Tubercle in the Lungs continues in its inflam'd State, the attending Fever may be call'd an *inflammatory Fever* from that part inflamed, but when the ſame apoſtemates, and an Ulcer is form'd, it then becomes a *putrid Fever*, ending often in an *Hectic*. The like may be ſaid of any Inflammation on the other *Viſcera*, turning to an *Abſceſs*: As alſo of the *ſecundary Fever* of the *Small Pox*, which, as our *Sydenham* takes notice, is a different Fever from the *Inflammatory*, preceding both the *Eruption* and *Maturation*; but ſo ſoon (ſaith he) as thoſe little *Phlegmons* are ſuppurated and turn'd to Matter, a new Fever ariſes, which is truly putrid, or a *putrid Fever*, properly ſo call'd, taking its riſe from ſome putrid Particles ſuck'd into the Blood, and as it were now poiſon-

ing the Patient, till the ſame are thence diſcharg'd or ſubdued; which nothing does more effectually than large bleeding, by which thoſe morbid Particles, which are as it were the *Fomes* of the Diſeaſe, are drawn off, whilſt the reſt are eliminated at the Termination of the Diſtemper by ſuitable *Cathartick*s.

There is another Diviſion I ſhall take Notice of, in relation to Fevers which is that from Dr. *Strother* *, who divides them all into *Ardent* and *Hectical*: Under both Kinds comprehending the *ſimple* and putrid *Synochus*, as alſo the Συνοχὸς or *malignant*. The firſt he ſaith has a quick Pulſe, Heat, and high coloured Urine with a copious Sediment, and laſts ſeven Days without Remiſſion; the ſecond has the ſame Appearances, but in a greater Degree, acquiring ſundry Names from its various attending Symptoms, as *Elodes*, *Aſſodes*, *Epiala*, *Rheumatica*, *Pleuritica*, *Anginoſa*, *Eryſipelatoſa*, *&c.* The latter is a continual Fever of the worſt ſort, uſher'd in with the moſt threatning Appearances, as the dry and black Tongue, *Vigil*, *Delirium*, *Sub-*

* In his *Criticon Feb.*

ſultus, pale, ſtraw-coloured, unconcocted Urine; which is farther ſubdivided into the *Simple*, *Malignant*, *Peſtilential* and *Peſtis*, bringing them all however under the aforeſaid two-fold Denomination; for if the Heat be either above or below the *natural Standard*, we either burn with a *Cauſus*, or are afflicted with a *Hectic*: Theſe two, *viz.* *Ardent* and *Hectical*, according to our Author, contain the ſummary of Fevers, whilſt their Extremes are the occaſion of all the ſupervening Symptoms, if we add ſome Qualities conjoin'd, from whence they may be ſaid to have their *Eſſe*. For if the *fiery* Particles are plentiful in regard of the *humid* ones, the *Ardent* is produced; but if the *humid* or ſerous ſuperabound the *Hectical*: And this he will have to be alſo the moſt uſeful Diviſion of them, under which are contain'd both *Intermitting*, *Remitting* and *Continual*, as well as the *Malignant*: The *Eruptive* are reckon'd of a *neutral* Sort; but in the farther proſecution of the ſame Subject, he tells us, that if we rightly conſider, we ſhall find that Fevers differ only in *Degrees*; that an *Ephemera* is the lighteſt of all, where the Urine ſettles

at the very beginning; that this *Ephemera* may turn to a *Synochus Simplex*, and that to a *Putrid*, which has its *Remiſſions* and *Exacerbations*, but no certain *Intermiſſions*: And this *Putrid* may degenerate into a *Malignant*; that each may turn to an *Intermittent*, which begins with Coldneſs, as does the *Remitting*; whilſt the *Malign* comes on with *Rigor* if of the *hectic* Species, but a *Horror* when of the *Ardent*: So that all are attended either with *Algors*, *Rigors* or *Horrors*, returning with each *Paroxyſm* of the *Intermittent*, but not ſo in the *Remittent*, where the ſame appears only at the firſt, unleſs ſhifting as they do frequently, the *Continual* remitting, the *Remitting* growing into *Continual*, and both running into *Intermittents*: A plain Indication, ſaith he, of their differing only in the *more* or *leſs*.

The laſt Account I ſhall give you of this Diſeaſe, ſhall be the following from Dr. *Sydenham*, which tho' diveſted of all *Theory* and *mechanic Solutions*, affords us as much Knowledge as the Nature of the ſame (for ought I know) may allow, eſpecially that of the *Epidemics*, viz.

"That

"That of Fevers of this Sort ſome proceed "from a ſecret and inexplicable Alteration in "the Air, infecting Men's Bodies, and not "depending on any peculiar *Craſis* of the "Blood and Humours thereof, otherwiſe "than that occult Influence has imprinted "the ſame upon them. And theſe continue "as long as this particular Conſtitution of "the *Atmoſphere* and no longer.

"There are others which ariſe from cer-"tain Irregularities of particular Bodies, by "treſpaſſing ſome Way in one or other of "the *Non-naturals*: Which being not pro-"duced by any general Cauſe, invade not "promiſcuouſly at the ſame time, but ap-"pearing every Year, and at all times of the "Year, we call them *Intercurrents* or *Spo-"radics*.

"Whether or no the former of theſe come "in any regular Courſe, or keep within "the ſame Circle of Times and Revolutions "of certain Years, I am not certain: But "this I know by many Obſervations, that "each new *Species* differs from the former, "and that the ſame Method which prov'd ſuc-"ceſsful one Year, may prove deſtructive in

"another. And farther, that when I once "light upon that Method which this or that "particular *Species* did particularly require, "I ſcarce ever fail'd of Succeſs during that "particular Conſtitution, reſpect being had "to the Age, Temperament, &c. of the ſick "Perſon: Till the old being extinct, ſome new "*Species* did ariſe; when I was again doubt- "ful how to ſteer ſo as I might not endanger "the Patient; and unleſs I took great heed, "I could not help but that one or two of "thoſe I firſt encounter'd, would be in Dan- "ger, till I had found out the *Genus* of the "Diſeaſe, when I could go on again readily "to the Cure of the ſame.

"But though I have obſerv'd with as much "Diligence as poſſibly I could, the divers "Diſpoſitions of divers Years, as to the ma- "nifeſt Qualities of the *Air*, that from "thence I might learn the Cauſes of this "great variety of *Epidemics*, yet I have re- "ceived no Benefit thereby. For I have per- "ceiv'd that thoſe Years which did agree as "to thoſe obvious Qualities, were yet infeſt- "ed with divers different Diſtempers: And "thus it falls out that there are many of

" thoſe morbid *Conſtitutions* of Years, which " proceed neither from Heat nor Cold, nei- " ther Moiſture nor Drought, but from ſome " ſecret unintelligible Alteration in the Bowels " of the Earth, whereby the Air about us is " contaminated with ſuch Particles as diſpoſe " Mens Bodies to this or that Diſeaſe, as long " as that *Conſtitution* prevails, which in a cer- " tain ſpace of Time withdraws, and gives " way to another: Each being accompany'd " with a Fever proper and as it were peculiar " to itſelf, which is not to be found at any " other time, and therefore I call theſe Fe- " vers by the Name of *Stationary*.

" Beſides theſe, there are particular *Tem-* " *peraments* of the ſame Year, wherein, tho' " according to thoſe manifeſt Qualities of the " Air, thoſe Fevers that follow the general " *Conſtitution* of the Year are more or leſs " *Epidemical*, or come ſooner or later, yet " chiefly thoſe which appear every Year (and " which we named *Intercurrents*) owe their " Riſe to this or the other manifeſt Temper " of the Air: Such as the *Pleuriſy*, *Quinſy* " and the reſt of this Tribe, proceeding com- " monly from ſudden Heat following pre-

" ſently

" ſently a ſevere cold Seaſon. 'Tis therefore,
" I ſay, probable, that theſe ſenſible Qualities
" may be inſtrumental in producing thoſe
" Fevers which exert themſelves in every
" Conſtitution: but not ſuch as are peculiar
" to any one Particular. Though we deny
" not that the abovementioned Qualities do
" more or leſs diſpoſe Mens Bodies to gene-
" rate this or that *epidemic* Diſeaſe, which
" may be ſaid likewiſe of any Error in the
" ſix *Non-naturals*.

" Again, when any *Conſtitution* produces
" various *Species* of *epidemic Fevers*, we are
" to obſerve that each differs in Kind from
" thoſe that have the ſame Name, but are
" under another. Yet how many ſoever
" peculiar *Species* there may be that invade
" under one and the ſame *Conſtitution*, they
" ſtill agree in the ſame general Cauſe that
" produces them, *viz.* in this or the other
" peculiar *Diatheſis* of the *Atmoſphere*, as alſo
" in their Encreaſe about the ſame Time.
" Moreover, this muſt be noted, that in thoſe
" Years wherein various *Species* break forth,
" they all make an Aſſault near the ſame
" Time,

"Time, after the ſame Manner, and with "like *Symptoms*, at their firſt Invaſion.

"Hence it appears, ſeeing the *Specific* Dif-"ference of *popular Diſeaſes*, viz. *Fevers*, "ariſe from the ſecret *Conſtitution* of Years, "that ſuch Perſons labour in vain as go about "to deduce the Reaſons of divers Fevers from "ſome morbific Cauſe reſerv'd in the Body: "Since it is evident that if any Perſon who "is very well, travels to ſome Parts of the "Kingdom, he will be ſeized with the Fe-"ver that rages there: And yet it is ſcarce "credible that any manifeſt Change ſhould "be impreſt by the Air, as to its obvious "Qualities in ſo ſhort a time, upon the Body "of this Man. Nor is it leſs difficult to "accommodate general Rules for the Cure "of ſuch. Wherefore in ſo great Uncertain-"ty, it is ſurely beſt to pauſe a while when any "new Fever ariſes, and to proceed gently to "great Remedies *(meaning doubtleſs Bleeding, "Purging, Vomiting, Sweating, and the like E-"vacuations)* obſerving diligently the *Genus* of "the *Fever*, and likewiſe thoſe Things that do "Good or Harm, that we may chooſe the "firſt and avoid the laſt.

Give

Give me leave now, my good Friend, to acquaint you, that after all these several Distributions, Descriptions, and Definitions of Fevers, were it proper for me to introduce one of my own, they should be principally distinguished, without referring to their Causes, either remote or proximate, as *Sanguineous* and *Nervous*. Not that we are to suppose the Blood in the latter to be unconcern'd, but that together therewith, some deleterious or morbid Impression is also fix'd upon the *fluid* of the *Nerves*, either someway impeding its Secretion at the Fountain Head, the Brain, or its regular Dispence by those Tubes to the Heart, Lungs and other Parts of the *Machine*; hence the Difficulty of Respiration, as well as Circulation to the Blood in general; the *Suspiria*, with Oppression on the *Præcordia*; the low, creeping and intermitting Pulse; the Prostration of Spirits, and Languor that comes on, and suddenly destroys the Sick labouring under the same.

This indeed is the *Febris Mali Moris, ac pessimæ Indolis*, which the common People *(having doubtless been so taught by some of the Faculty)* call Fevers of, or on the Spirits, which

which whether ſo or not, may poſſibly ſerve better to direct the *Regimen*, than that Diviſion aforeſaid into *Hectical*, and *Ardent*.

Under the firſt, *viz.* the *Sanguineous*, I would have comprehended all of the *inflammatory* Kind, ſuch as are attended with great Effervеſcence or Ebullition in the Blood, with ſtrong and high Pulſe, deep Urine, great Thirſt, Inquietude, Vigil, Phrenſy, *&c.* The particular Fevers under which Appellation, are thoſe which accompany the *Quinſy*, *Peripneumony*, *Pleuriſy*, and all ſuch as are attended with, or have adjoined to them, either a general or particular *Plethora* of the Veſſels, or exceſſive Rarifaction of their Contents.

Among the *Eruptives*, under the ſame, I ſhould reckon the *Small Pox*, *Meaſles* and *Scarlet Fever*; whilſt ſome others of the *Raſhy*, *Miliary*, but eſpecially the *Petechial*, as having the Symptoms juſt before enumerated, ſome or other of them attending, ſhould be placed under the *Nervous*. And the *Intermittent* may ſtand *Neuter*, if truly ſuch, at leaſt diſtinguiſhable only as *primary* and *ſecondary*: By the firſt underſtanding the common *Ague*; by the laſt, the *Synochus* or any other *continent*

Fever,

Fever, after some Days, taking the Type of an *Intermittent*, either *quotidian* or *tertian*; which being duly form'd, admits of the same Cure with the *Ague* itself.

I have now done with the several *Definitions* and *Divisions* of Fevers which I found nigh at Hand, and will hasten to the Cure, presenting you first with an Essay towards the same, in the *mechanical* Way, from a Gentleman I have already often quoted, the learned *Pitcairn* *.

'First, it is manifest, that the Cure of every *legitimate* Fever, accompany'd by no 'others, is most expeditiously done by Bleeding, and by Remedies that abate the Blood's Rarefaction; such as Sugar of Lead, purify'd Niter, Spirit of Sulphur, Juice of Lemons, 'distill'd Vinegar, Emulsions of the cold Seeds, and more especially Blisters, which 'draw off part of the Serum too much rarefy'd; and these are the Remedies to be used 'in every *legitimate* Fever, till we have the 'good luck to find out one, that will immediately abate the Blood's Rarefaction, and

* Elements of Physick.

'dimi-

'diminish its circular Motion, without bring-
'ing on worse Symptoms.

'Secondly, you are carefully to observe
'that you do not easily administer *Sudorifics*
'in these Fevers, because they will keep up
'the augmented *Velocity* and *Rarifaction*
'much longer, and we ought never to pre-
'scribe such, but when there are Signs of
'*Concoction* (which before were not) in the
'Urine: And such Signs will denote it not
'to be a *legitimate* Fever in every respect,
'but a Companion to some other Disease,
'which arises from a Viscidity of Humours
'capable of *Concoction.*

'And thirdly, when this *Viscidity* begins to
'be so broken, as to be capable of Separa-
'ration in the Kidneys with the Serum,
'it is a Sign of a *Concoction*; And when
'the same Matter, which can pass the *Renal*
'*Streiners*, by a farther Diminution, is ren-
'der'd fit to be carry'd through the *cuta-*
'*neous Glands* in Sweat, then, and not be-
'fore, *Sudorifics* may be administer'd with
'Safety; which Time may be discover'd by
'the Signs of *Concoction* in the Urine, which
'is a Sediment equal and copious, with re-

'gard to the Diſeaſe: And thus much of 'the *legitimate* or ſimple Fevers and their 'Cures.

'But Fourthly, the Cure of a *continued* 'periodic *Fever*, cannot be well underſtood, 'without being firſt taught the Cure of *In-* 'termittents, as ſuch; becauſe the Cure of 'Periodics is compounded of the Cure of a 'ſimple Fever, and an *intermittent*, as ſuch, 'reſpectively.

'Therefore unleſs old Age, or a worn out 'Conſtitution forbids, at the longeſt Di- 'ſtance from a ſubſequent Fit, in an *Inter-* 'mittent, a Vein ought to be open'd; both 'on the Account of the *Fever*, which threa- 'tens when the Fit is at the higheſt, and 'upon Account of the *Viſcidity* from whence 'it has its Origin; for Bleeding diminiſhes 'the *Viſcidity* of the remaining Maſs.

'And Laſtly, ſince this *Viſcidity*, for the 'moſt part has its riſe from what is taken in 'by way of Diet, and the *Lentor* is de- 'riv'd from the firſt Paſſages: And becauſe '*Vomits* more effectually remove ſuch *Lentor* 'than *Purges*, and by the neceſſarily greater 'and more frequent Contraction of the Sto-

'mach

'mach and Abdomen, preſs out that *Lentor*, 'which adheres to the ſmall Veſſels, in a 'ſhort time, which *Purges* would hardly 'reach in an Age, and becauſe Delays are 'dangerous in a Fever; therefore a *Vomit* 'ought always to be timely enough given, 'for its Operation to be over before the re-'turn of the Fit; which may be repeated 'once, and ſometimes twice, at due Diſtance, 'if the Patient is able to bear it, and is not 'ſubject to vomit up, or ſpit Blood.

'When the vomiting is over, ſome *febri-'fuge* Medicines are to be given, (though im-'properly ſo call'd) and which ought rather 'to be term'd *attenuating* or *aperient*, of 'which generally the *Bitters* are eſteem'd the 'beſt; among theſe however the *Cortex Pe-'ruvianus* is yet much the more preferable.'

After this *Specimen* in the *mechanical* Way, I ſhall proceed to my own Method, and that I may obſerve ſome order therein, purſuing the Diviſion of Fevers into *ſanguineous* and *nervous*, ſhall begin with the former or *inflam-matory*, in which through an extraordinary Heat and Rarifaction thereof, the Blood is thrown with Violence on ſome particular

Parts, either external or internal; giving Riſe, as we have formerly obſerv'd, to a peculiar Epithet, thence borrowed, *viz. Anginalis, Pleuritica*, &c. as a Note of Propriety, or belonging to the ſame; and here before I proceed farther, give me leave to entertain you for a minute or two, with the Opinion of a late Author * concerning the Nature of an *Inflammation* in general: With which for its Novelty and Force of Perſuaſion, being myſelf well pleaſed, it may not perhaps be unacceptable to you, my Friend, if yet unacquainted therewith, *i. e.* his new Diſtinction of the *lymphatic Veſſels*, into *Arteries* and *Veins*; the former delivering (like the Arteries the Blood) their Liquor to all the Parts: The latter (in like manner as the Veins) carrying it back to the Ciſtern or Fountain; the riſe of which Veſſels, we have already given you from the ſame Author, when ſpeaking in our former, of the Nature of *Secretion*, with the *Modus* of ſecerning the ſeveral Fluids from the Blood.

* *Helvetius* in his Eſſay on the *Animal Oeconomy*.

'Ana-

'Anatomy (as he tells us) confirms this 'Notion, which tho' it ſhews only the moſt 'conſiderable of theſe Veſſels, and is not 'able to diſtinguiſh the greater Part, too 'minute and intricate to be plainly diſcern'd; 'as in their natural State, carrying only a 'thin tranſlucid Liquor, nevertheleſs do but 'obſerve the numberleſs ſmall Veſſels, In-'jections offer to our View: Conſider they 'neither appear Red, nor are full of Blood 'during the Life of the Animal, unleſs by 'Accident, or under an inflamed State; and 'then we ſhall eaſily perceive, that they can 'be nothing in reality but *lymphatic* Veſſels, 'tho' by moſt Anatomiſts, appropriated to 'the Blood.

'It will not therefore be improper to ob-'ſerve by the Way, that theſe fine Injections 'do often ſerve rather to lead us into Error; 'and are more for Oſtentation than Inſtruc-'tion and Uſe. They may indeed guide us 'to more important Diſcoveries, but they 'are alſo capable of hiding a great many 'Truths from us, and of ſtifling ſeveral Diſ-'coveries: The Confuſion into which they 'throw the *ſanguinary* and *lymphatic* Veſſels,

frequently hinder us from diſtinguiſhing them with the neceſſary Exactneſs.

In their natural State, theſe *lymphatic* Veſſels cannot admit the Blood, becauſe where they commence, they are too ſlender; or rather becauſe the *Lympha* which they contain, is a Fluid wholly differing in its conſtituent Parts, from the *Globules* of the Blood; and indeed, tho' it circulates in the Blood Veſſels, along with thoſe *Globules*, yet does it never perfectly mix with them, as is ſeen by the help of Glaſſes, in the *Meſentery* of the Frog, or in the *Fins* and *Tails* of certain Fiſh; but when the *lymphatic* Arteries happen to be dilated, or the Blood put into any violent Motion, it does ſometimes open itſelf a Paſſage into them, as in the Caſe of every Inflammation falls out; for then the Force is greater than the Reſiſtance either of the *lymphatic* Veſſel itſelf, or the Fluid it contains, as in the Caſe of *Fevers*, where ſometimes the Rarifaction of the Blood is ſo great, as very much to dilate its own Veſſels: The *Lympha* in like manner will be rarify'd, and its Veſſels dilate either through the

Rari-

'Rarifaction of their own Liquor, or by 'means of the Dilatation of the Blood Veſ-'ſels, which being diſtended will neceſſarily 'enlarge the Orifices of the other, which are 'connected to them.'

'When the Blood then at ſuch Times '(i. e. *the Patient in a Fever*) is forced in-'to the *lymphatic* Arteries, from whatever 'Cauſe; no wonder it ſhould ſtagnate, and 'ſtretch theſe tender Veſſels, whence Red-'neſs, Pain and Tenſion, with great Heat 'about them; the firſt is occaſion'd by the 'Blood got into theſe Parts, which before 'looked white, as carrying in them a thin 'tranſparent Liquor: It muſt require a 'greater degree of Heat, ſince the Blood in 'this Caſe fills a greater number of Veſſels, 'and in greater Quantity than it did before: 'The Pain ariſes not only from a ſtretch of 'the Veſſels themſelves, but of the nervous 'Membranes betwixt which they are placed.'

Finally to confirm this his Opinion, or by way of farther illuſtrating the ſame, he brings an Inſtance of the common *Ophthalmy*, or *Bloodſhed Eye*.

'The Redneſs or Inflammation of the 'Eye, is here cauſed by the Blood having 'paſſed out of its own, into the *lymphatic* 'Veſſels, belonging to the Part; whence we 'infer, the ſame of all the other *lymphatic* 'Arteries from the capillary Blood Veſſels, 'which are diſtributed in great Plenty 'through all parts of the Body; the Caſe 'being the ſame in every *Inflammation* of all 'the other Parts, which is occaſion'd by the 'Blood's flowing into the *lymphatic* Arteries 'of ſuch Parts, as obſerved now, of the Eye, 'and as we ſee happen, even without reflec-'tion, in the *lymphatic* Veſſels of the Skin, 'when by any means, ſome unwonted *Effer-'veſcence* appears thereon, as in ſudden Fluſh-'ings or the like.'

The Reaſon why theſe Veſſels are deſtitute of Motion, he tells us, is becauſe they are out of the Force of the Heart, in like manner as are the Veins.

To detain you now no longer, I ſhall haſten to the *Regimen* of theſe Fevers in general: And as *Plenitude* of the Veſſels from ſome *Crapula*, or obſtructed Perſpiration, for the moſt part, gives Being to the ſame, at leaſt

leaſt the Blood's being too much rarify'd therein; ſo a *Depletion* of them by Bleeding, as the Strength will allow, together with other ſuitable cooling Remedies, which the Caſe ſhall require, are here indicated: After which the ſetting open the Pores by a Draught of ſome thin dilating Liquor or other gentle Remedy may be farther uſeful.

The Signs of this *Inflammation* or *Plethora* in the Veſſels, you are to take from the Patient's Habit, frequently *ſanguine*, with a florid Complexion: His way of living, with the antecedent Cauſe of the Ferment ſtirred up in his Blood, the inflamed Urine and high Pulſe, the tenſive Pain in the Head and other parts of the Body: But here you are to note, that oftentimes through a meer Fulneſs of the Veſſels, in this kind of Fever, the Pulſe will be oppreſt, and the Stroke ſeem feeble, or from the exceſſive Rarifaction of the Blood, as it were ſtifled, which after Ventilation by the Lancet, recovers itſelf and beats ſtrong and high.

In drawing off a ſufficient Quantity of Blood, altho' the ſame appears florid at the firſt, yet if Pains upon the Membranes accompany,

company, as in *pleuritic*, and *rheumatic* Affections, you will find it after *fizzy*, or like melted Fat, ſtreaked oftentimes with a yellow or blewiſh Caſt at the top; and this hint about the Pulſe, I thought convenient to give you, that you may not be diſcourag'd, by the lowneſs thereof at ſuch Times, and in thoſe *plethorick* Habits, to bleed your Patient, eſpecially at the firſt Attack of the *Fever*, before his Strength has been thereby impair'd, which in the *State*, much leſs at the *Declenſion*, cannot be ſo ſafely enterpriſed.

After Bleeding, repeated as you ſee Cauſe, if a Debauch either in Eating or Drinking gave occaſion to the Diſeaſe; or otherwiſe, if any loathing or retching ſo require, a Vomit ought to be adminiſter'd of the *Rad. Ipetocuhan* given in Sack Whey, Carduus or green Tea, or Chicken Water, as your Patient ſhall like beſt; which being over, he is to be put into his Bed, with the ſame covering he has been us'd to; and now for his Thirſt, let him be indulged in the ſame thin Liquor, particularly the Whey, or an Emulſion of the cold Seeds and Almonds in Barley Water, likewiſe the antient *Ptiſan*: Nor

would

would I be ſo rigorous as at all Times to forbid a Draught of Table-Beer with a Toaſt, between whiles, provided no rheumatick Pains, *Cholic* or *Dirrhœa*, attended; for this being our common *Diluter* in the Time of Health, or what we have been ever accuſtom'd to, is not always to be denied in Sickneſs, when deſired, under the Reſtrictions abovementioned.

I muſt inſiſt upon this Method of giving a Vomit, ſuch as here directed, at theſe times, after bleeding your Patient; becauſe I know of nothing ſo likely to draw off the Fuel, and thereby leſſen the Fever, let the Nature thereof be almoſt what it will. You may treſpaſs indeed, in bleeding, but I think, you cannot in this particular Evacuation, if the Sick is not ſubject to a Spitting of Blood, in any Stage thereof, where a *Nauſea* ſhall indicate, and the Doſe of the ſaid Remedy is ſuited to his Weakneſs, of which thus given, where ſuch call for it appear'd, even under the greateſt, I cannot ſay that I have once repented.

The Vomiting being over, if the Fever ſtill runs high, or ſeems to threaten the Head by

a too rapid Courſe thereof, you may venture to take away more Blood, if the Strength admits after which, the Sick being uneaſy, where ſomething farther is not done to remove his Complaint, and (as he thinks) to ſhorten his Diſeaſe, you are to give ſome *Alexipharmic Bole* or *Powder*, waſh'd down with a *cordial* Julep between whiles.

But here, that you may rightly underſtand me, I muſt explain myſelf what I mean by this *Alexipharmic*, and what by my *Cordial*. Firſt then, negatively, I mean none of thoſe jumbled Compoſitions of the Shops, the *Theriaca & Mithridatium*, which are now ſo far from deſerving that Title, that they may rather be termed *Pharmaca*, as implying in the worſt Senſe of the Word, *Poiſons*, and which I am afraid, through their indiſcriminate Uſe, have carried off more People than all the Plagues we ever had in *England*: Nor by the Word *Cordial*, would I be underſtood the *Treacle-Water*, or any other diſtill'd Compound, much leſs the *Tincture* and *Syrup* of *Saffron*; for tho' both theſe are allowable in ſome of the *nervous Fevers*, ſo called, eſpecially towards the Declenſion, when Na-

ture flags, and the Spirits are unable to expand themſelves, the Pulſe grows feeble, together with the native Heat: Yet at theſe Times, or in our preſent Caſe, a Morſel of the *Conſerva Lujulæ*, with a few Grains of *Niter* is the beſt *Alexipharmic*, as a Draught of an *Emulſion ex Sem. Fr. cum Amygd. in aq. Hordei*, the only *Cordial*.

Theſe may be given at a due Diſtance, till the Ebullition of the Blood is over, or that the Pulſe is reduc'd to its wonted Tenure, before which a moderate breathing Sweat uſually appears, the Urine alſo together therewith, forboding a *Criſis* now at hand, from its intenſe Colour turns paler, drops a Sediment, and the Sick recovers; when it may be neceſſary to give ſome lenient Purgative, that without raiſing a Commotion in the Humours of the Blood, may diſcharge the morbid Feculencies therein remaining; nor muſt you all the time forget to empty the Bowels daily, or each other Day, of the inteſtinal Fæces, by ſome cooling laxative Clyſter, if they do not anſwer of themſelves.

This Regimen will ſerve in common for all Fevers, attended with great Heat and *Inflammation*,

flammation, or which may be termed *ſanguineous*, as thoſe of the *Angina*, *Peripneumony*, *Pleuriſy*, *Rheumatiſm*, ſaving that theſe uſually require more frequent Bleeding, and in larger Quantities, wherein truly the whole curative Scope in a Manner conſiſts, eſpecially that of the *Pleuriſy* and *Quinſey*; but in the true *Peripneumony*, the Oyls and expectorating Remedies are alſo to be preſcribed, as peculiar to the ſame.

I have purpoſely forborn the Mention of *Bliſters*, not only for that I cannot come into them myſelf, ſo readily, as is now the Mode among us, in every of theſe Fevers without Exceptions, unleſs in ſome of thoſe juſt now mentioned; except ſome obſtinate Head-ach or Stupidity encourage their Application; but for that, I intend preſently to give you my own, with the Sentiments of ſome others, about them. Nor can I ſee Reaſon to alter this *Regimen* in ſome *eruptive Fevers*, of the *inflammatory* Kind, I mean particularly the *Small-Pox*, eſpecially in full or ſanguine Habits, of the *cohærent* or *conſtant* Sort, ſetting aſide the repeated Bleedings, which too may be requir'd from an over-bearing Heat, as

well

well before the Time of Eruption, as at that of the *ſecond Fever*, attended with Phrenſie and ſtreight breathing, as alſo the clyſtering and purging, before the State of Maturation.

And this is all I have to offer for your general Obſervation concerning the Fevers of this Claſs: For as I intended not to give any particular *Formulæ*, or to ſtuff my Letter with *Præſcripts*, ſo neither is there Occaſion for what every Phyſick-Writer rather too much abounds with, and with which you are already very well furniſh'd: To be plain indeed herein, tho' I ſcarce know any Phyſician who is ignorant of one Remedy or other, to anſwer the ſeveral *phyſical Intentions*, yet perhaps it may not be ſo eaſy to find thoſe who are rightly appris'd at all Times, when this or that *Intention* are the true *Indicata*, or require to be anſwer'd.

To the ſame purpoſe, is that excellent Remark of Dr. *Sydenham* *, viz. 'That the true 'Practice of Phyſick conſiſts chiefly in being 'able to find out the genuine *Indications* of 'each Diſeaſe, when none will be at a Loſs

* In his Preface to his Book of acute Diſeaſes.

'to find *Remedies* that may anſwer each. 'And truly he that is more taken up about 'theſe *Remedies* than tracing out thoſe *Indi-* 'cations, is only inſtructing *Empirics* how 'to ape the *Phyſician*.

One of the beſt Authors upon this Subject, if we except the learned Dr. *Freind*, and our Friend *Sydenham*, is a very antient one, but lately reviv'd among us, by Recommendation of the former, I mean *Lommius*, whoſe Treatiſe is worthy your peruſal.

This honeſt Writer ſet forth his Book of *continual Fevers* in the Latin Tongue (in which the ſame is now reprinted) above 150 Years paſt, wherein you will find, without one ℞, he places the Cure of theſe Fevers in *Bleeding*, *Dilution* and *lenient Purgation*; neither the firſt nor laſt, however, to be enterpriz'd, but with Regard to the Strength of the Patient, evinced by that of the Pulſe, and the Time which is the Beginning of the Invaſion, for bleeding; as that of the Declenſion of the Diſeaſe, for *purging*; the untimely Uſe of both, as he judiciouſly remarks, having been the Death of ſome, as the heaping up of Medicines, has been of more; eſpe-

cially

cially thoſe by which Nature has been ſomehow interrupted, or put aſide the Work ſhe had began, and, perhaps, otherwiſe compleated.

About the *State* or Time of *Concoction*, he takes Notice of the *Fons frigida*, a large Draught from whence he now thinks proper to give the ſick Perſon, by the Example of *Galen*: Whence, he ſays, the Heat being driven outwards, either a *critical Sweat* follows, if not *Vomiting*, or elſe a *bilious Flux*; ſo uncertain, it ſeems, ſtands the Iſſue of this Experiment, which is to finiſh the Diſeaſe and reſtore Health: But then obſerve, he exceedingly blames thoſe who, upon any Pretence whatever, ſhall dare to adminiſter this Remedy at any Time of the Fever, which was the Cuſtom of *Avicen*, and has been lately inculcated among our People, by a crack-brain'd Divine, in his *Febrifugum Magnum*; in reſpect to which you may conſult ſome Remarks lately publiſh'd, as an Appendix to the *Modern Quack*, by Way of Anſwer to this extravagant Advance; I muſt own, indeed, I think it ſo hazardous an Experiment, that I cannot adviſe you ſhould try

it at any Time; for if the Evacuations ſhould not follow or prove critical, as unſeaſonably adminiſtred, before Nature was prepared, when the Strength is much enfeebled, and ſhe unable to rouſe up, and diſcharge her now double Burthen of the *Diſeaſe*, and the intended *Remedy*, by one or other of the Ways here ſpecified, what muſt enſue but Suffocation of the vital Heat, and the abſolute Deſtruction of the Patient?

But I ſhall now give you my Thoughts about the *Regimen* of the Fevers I call *Nervous*, and which (as the Pulſe muſt direct you) is, generally ſpeaking, to be different from the foregoing; for here no Evacuations, unleſs thoſe of *Vomiting*, *Sweating*, and *Bliſtering*, are to be admitted. When contrary alſo to the former, being ſtill guided thereby, as the Pulſe is weak, and the Patient complaining of great Langour or Lowneſs of Spirits, ſo the warmer Remedies will be ſometimes required to raiſe the ſame, to invigorate the Blood, and quicken its Motion; of which Kind are the *Lapis Contrayerva*, the *Pulv. ad Guttet.* the *Pulv. e chel. Canc.* &c. with a few Grains of *Crocus* or *Caſtor*;

or

or where this laſt is nauſeated by the weak Stomach, the *Spec. Diambr.*: And when by theſe Means, together with the diluting Liquors, a ſeaſonable Sweat breaks out, I always allow my Patient under great Languor, a Glaſs of ſome ſoft agreeable Wine, ſuch as that of *Sherry*, once, if not oftener, in twenty four Hours, inſtead of a *Cordial*: Nor can I ſee Reaſon to forbid the ſame, at theſe Times, any more than the *Pearl Julep* ſo cuſtomarily taken.

And having here made mention of the *Bezoardic* Compoſition, or the *Pulvis Gaſconicus*, I can do no leſs than advocate in its Favour, ſo far as to believe it the beſt Remedy (conſidering how the Practice of Phyſick is manag'd with us) that ever could have been invented.

The worſt I have heard objected againſt it, is, that of its being a chargeable, inſignificant, or mere *abſorbent*, and that but an indifferent one, in Compariſon of ſome vilet we trample daily under our Feet; and farther that we trifle while we uſe it.

I wiſh I could ſay no worſe of our *Treacles* and *Mithridate*, with ſome others, daily in

Uſe: For ſince the moſt knowing among us can underſtand very little of the real Eſſence of theſe *Fevers*, or fathom the ſeveral Proceſſes of Nature, in attempting her Reſcue from the ſame; which of us can be at all Times poſitive, he has not ſome Way hindred, as well as promoted her imperceptible and inſcrutable Way of working this Deliverance?

Happy, my dear Friend, ſhall we be at the long run, if we can accuſe ourſelves of nothing more than a harmleſs trifling at theſe Times: Happy, I ſay, if under any Dilemma, we have that inward Peace and Satisfaction, that we do no Miſchief. How this can be the Lot of ſuch as are forcing Fire-Balls down Mens Throats, of *Theriac. Mithridate, Camphir. Snake-Root*, with thoſe Creatures thereof, the *volatile* and *fix'd Salts*, and theſe every three or four Hours, waſh'd down with as hot a Mixture of ſome Spirits, which they call a *Cordial*, at a Time when the Sick are ſcorch'd, as I may ſay, to Death; Witneſs the dry and parch'd Skin, the black and bruſhy Tongue, the cruſty Fur upon the Teeth, and other Signals of an *Incendium* within:

in: How theſe, I ſay, can have that inward Aſſurance that they never do worſe than trifle; or that inſtead thereof, they have not actually deſtroy'd thoſe Lives with which they were intruſted, I cannot ſee, nor I think any conſiderate Perſon whatever.

If then, upon this Occaſion, it muſt be ſaid we trifle, becauſe, perhaps, we give no Medicines at ſome Times, or none but what are ſafe and innocent; thus trifled our great Maſter *Hippocrates*, who, tho' conſtant in obſerving, gave but few, or for ſome Days none at all, till he could ſee what Nature call'd for, and the Method which ſhe aim'd at for helping of herſelf: And thus trifled our late famous *Sydenham*, who tells us, that finding his Patient one Day no worſe than the Day before, and the Day following in the ſame Condition, thought it his Duty ſtill to wait her Motion, fearing, by intermedling, he ſhould do ſome Hurt, till Dame Nature ſhew'd him what Way he was to take, by ſome more manifeſt Indication than he was yet Maſter of, or what kind of Remedy ſhe ſtood in need of.

'I am not aſhamed (ſaith he) to own that 'more than once I have adviſed beſt for 'my ſelf and Patient, in doing nothing, 'when it was not plain to me what ought 'to be done; For whilſt I was thus lying 'by, and waiting for an Opportunity, the 'Fever either went off gradually of itſelf, 'or was reduced to ſuch a Type, as I knew 'how to cure it. But it is a ſad Thing that 'moſt of the Sick will not underſtand that 'it is as much the Part of a ſkillful Phyſician 'at ſome times to do nothing, as at others to 'give the moſt effectual Remedies, by which 'they deny themſelves the Benefit of a juſt 'and fair Proceeding: Accounting this the 'Effect either of Negligence or want of 'Judgment; little conſidering that the moſt 'ignorant *Quack* knows how to heap one 'Medicine upon another, as well as the moſt 'judicious and ſkillful Phyſician.

Returning now to the *Bezoar*, which a learned Gentleman * ſo much decries, and endeavours to depreciate; I muſt adviſe you, notwithſtanding, to entertain a good Opinion

* Dr. *Slare* in his Obſervation and Experiment upon *Bezoar*.

thereof,

thereof, either by itſelf or in the *compound Powder of Crab's Claws*, in which the ſame is an Ingredient; and where your Patient can pay for it, I would never have it now omitted in your Preſcription, at leaſt, that you make it a Part thereof; by which I think I may enſure you this one Advantage, that no Phyſician, beſides the laſt mention'd, who ſhall chance to be call'd in upon you, will ſay you have done amiſs; or, if he be a Perſon of any Candour, find fault for your ſo doing, which I cannot promiſe ſhall not happen, at our preſent low Ebb of Honour, under any other.

The late learned Dr. *Edward Tyſon* had a great Opinion of the *Bezoar*, who was no ſuperſtitious Phyſician, nor regarded traditionary Accounts of the Virtues of any Drug or Medicine, that was not confirm'd to him by Experiment or Obſervation: I have heard him ſay, when I had little Experience of it myſelf, that he was ſatisfied of its cordial Virtue, from many Inſtances, but in none more remarkably than in a very antient Alderman of *London*, Father, in his Time, (as uſually termed) of the City, and Preſident of

Bridewell, the famous Sir *Robert Jefferys*, who being through Age meerly, and a Defect of natural Heat, ſeized with a Mortification on his Toes, took half a Dram of the *Eaſtern Bezoar*, in the Manner ſome Gentlemen now give the *Cortex* every four Hours, which gave him (as he expreſs'd himſelf) new Life and Spirits: Inſomuch that after few Days, the Mortification ſtop'd, and the dead Parts being removed, his Leaſe of Life was farther lengthen'd: And farther that it had this Property beyond moſt other cordial Remedies ſo denominated, of being agreeable to Nature, and to the weakeſt Stomach, which cannot, indeed, be ſaid of ſome others, (as in particular the *Cortex*) that it fired not the Blood, (tho' a kindly *Sudorific*) by exagitating its Maſs, and cauſing a Perturbation among the Humours therein; of all which I am long ſince fully ſatisfy'd, by Experiment upon myſelf.

And it will be ſurely time enough to diſcard this friendly and moſt innocent Remedy, when we have a Subſtitute that will do more Service and leſs Hurt: The Chalk, nor yet the cauſtic Salt, which the ſame Perſon, who finds

finds fault with *Bezoar*, recommends, are doubtleſs none of theſe; the firſt, however a great *Alkaly* or *Abſorbent*, being ſo far from a *Diaphoretic*, as he would inſinuate, that we have few better *Anti-ſudorificks*, or which will do more in repreſſing the melting Sweats of *Hectick*s, binding up the looſe Texture of the Blood, and preventing its farther Diſſolution; and the laſt, tho' ſuited to take off the ſymptomatic Vomiting in Fevers, and to ſtop the Progreſs of ſome *Intermittents*; yet where there is a Tendency to Stools, not ſafe to be given, ſince by pricking the Fibres of the Stomach, it will increaſe the Looſeneſs, and that way endanger the feeble Patient.

But I ſhall enlarge no farther in the Commendation of this moſt ſafe, and often ſerviceable Remedy; ſince all the Rhetoric its Opponent has uſed, with the ſugar'd Words to ſweeten up the Ladies *, they ſtill hold it, with the much greater part of the Faculty, in as good Eſteem as ever.

There is another Compoſition coming now into Requeſt, upon the ſame Occaſion,

* See *ibid.* His Vindication of Sugars dedicated to the Ladies.

wherein

wherein *Bezoar* has a ſhare alſo, with ſome of the other *Abſorbents*, and which I adviſe you ſhould at theſe times make a part of your Preſcription, that is the *Confectio Raleighana*, of great Repute long ſince in private Practice, and now recommended to the College, from the good Opinion a leading Gentleman therein has conceiv'd thereof; and which others I think ſhould the rather entertain, if it were upon no other Account, than that of its being more temperate and agreeable to the Sick in general, than many others going under the Name of *Alexipharmicks*, which are commonly preſcribed.

Theſe Fevers having run on ſome Days, do frequently intermit: The Συνοχὸς turning, as we have noticed before, to a Συνοχὴς: As a Preſage of which the Urine now ſhews ſome tendency to Concoction, and from a crude, becomes firſt turbid, afterwards letting fall a lateritious Sediment, a Sweat breaks forth, and the Symptoms grow milder.

In this Caſe, it will behove you to wait the Circuit of a ſecond *Paroxyſm*, which being fram'd in ſuch manner, that you can be aſſur'd of the Intermiſſion, you may then,

but

but not ſooner, adminiſter the *Cortex*, giving it at ſuch Diſtance, and in ſuch Quantity, that your Patient, if poſſible, may take four or five Drams, before the approach of the next Fit; as if the Interval exceed not ten or twelve Hours, you are to order ℈ij. at leaſt, if not ʒj. where the Sick can bear it, every two Hours, but if the ſame is longer, once in three or four: Obſerving diligently that you begin not before the hot Fit is over, and the Sweat breaks forth; that you are alſo as cautious in preſcribing it where you have not Encouragement from the ſaid *Hypoſtaſis* in the Urine, or that the Intermiſſion is irregular and uncertain; for whilſt the former is crude and unconcocted, you can hope for little Benefit by the Bark, and as little room to give it under dodging Intervals.

We have, I know, ſome Gentlemen among us, and thoſe of Note too, I could name, who are very early, I fear ſometimes overhaſty, in giving of this Drug before the Fever Fit is form'd, or that they can have Satisfaction, there is more than *Remiſſion* and *Exacerbation* thereof; and this altho' the Breaſt is ſtraitned, the Breathing anhelous,

with

with other the Symptoms of an Eruptive Fever little favouring its Exhibition; for which they alledge the Danger by Delay, of miſſing an Opportunity for giving it at all afterwards.

But truly, Sir, I have ſeen ſo many Miſcarriages, which I could impute to nothing more than the unſeaſonable uſe thereof, ſuch as *Coma*, *Delirium*, Oppreſſion on the *Præcordia*, tremulous Nerves and ſubſultory Tendons, with encreaſe of all the Symptoms; that being therefore deter'd myſelf, I would caution you againſt an over-forwardneſs, or till you are ſatisfy'd, the pretended Shiver was other than ſome nervous Rigour, the Heat, a ſimple Exacerbation, the Sweat ſymptomatical, and the Reſpite a ſhort and ſimple Remiſſion only.

I muſt acknowledge, under this Difficulty I have been ſometimes concern'd, that I have not comply'd with the Importunity of others, for their Satisfaction I think, rather than my own, in giving this Remedy; but I have been much oftner pleas'd, that I did delay it, where quickly after I had reaſon to believe, it would have proved fatal to the Sick;

Sick; and I think I may ſay, it has been ſeldom, if ever, that I repented on my own Part, not giving it, till I was convinc'd by a ſecond Circuit of the Fever, that the *Type* was form'd to juſtify the ſame.

As a farther Security to my Patient, under theſe Doubts, and at ſuch Times, I always apply Bliſters, if there be room for them, or thoſe laid on before, have ceaſed their Diſcharge; as behind the Ears, extending to the ſides of the Neck, the Arms and Legs: The opening whereof will be a great Security to the nervous Syſtem in general, and to obviate the Symptoms thence ariſing.

Among theſe Fevers, there is none we more frequently meet with, or which carries with it a worſe Aſpect, even in the beginning, than that attended with a languid Pulſe, Oppreſſion on the Breaſt, and an Appearance of a faint Raſh or marbling thereon coming forth, and preſently retiring in again, a ferretty Eye, with a confuſed Aſpect, like one amazed: Soon after the Tongue grows black, and feels ſcabrous, yet without Thirſt; and in few Days more, the Patient falters in his Speech, a cruſty black Furr adheres to his Teeth,

Teeth, he makes a bilious, and ſometimes pale, Straw-colour'd Urine, takes no Notice of any Thing about him, but lies as it were in a neutral State, neither dead, nor ſcarce alive.

In this Caſe, I have been ſometimes at a Stand, and doubtful what Method I ſhould take, by which my Patient might be leaſt endanger'd; for tho' the dry Tongue, the furred Teeth, and the parched *Fauces*, give the Signal of great Heat within, and ſeem therefore to indicate a cooling *Regimen*; yet the low and creeping Pulſe, the chill and clammy Sweat about the Head and Face, the great Faintneſs and ſinking of the Spirits, require ſeemingly the warmer Medicines.

Upon which Account, that I may proceed with the greater Security, I uſually treat the Sick under ſuch Prædicaments, as I obſerve our beſt Writers upon that Subject, did the *Peſtilential*: Neither with *Theriaca*, nor yet *Mithridatium*, much leſs the *Egg Electuary*, and the *ſerpentary Root*: But the *Conſ. Lujulæ* and *Lap. Contrayer.* adding thereto at ſome times a few Grains of Nitre, or when

ſubject to *Deliquium*, Saffron, in a ſmall Draught of the *aq. Lact. Alex. & Theriacalis*, edulcorated *cum Syr. Limon. vel e Cort. Citri*, or in place of this, I give ℈ij. of *Raleigh's Confect.* with as much of the *Pulv. e chel. Cranc. C.* made into a Draught, with the ſame Cordial Waters, or a Bole with either of the Syrups, which I repeat once in ſix Hours, ſhifting the *Epiſpaſtic* from one Place to another, as the preceding are drying up.

But alas! how few under theſe Circumſtances can we retrieve, either by this or any other *Regimen* whether hot or cold, in Compariſon of thoſe who ſink, a little farther Converſation with them who are thus ſeized, will convince you.

There is indeed a great Overſight, of which our common People are guilty, which is, that the Fever not burning out like the *ſanguineous* or *inflammatory* Species, they are leſs careful to keep from the cold Air, till their liſtleſsneſs to Action, inſenſibly, as it were, ſtealing upon them, they are unable longer to get abroad, yet will ſtill be moving about Houſe, or ſitting by the Fire ſide, complaining

ing they are giddy, faint and ſick, for which ſome have inadvertently both purged and bled, in the uſual Form of their other Diſorders; but think themſelves not bad enough to be confin'd to the Bed, or ſend for the Phyſician.

And here I muſt remark of Dr. *Sydenham*, that he was ſurely leſs heedful than ſo prudent a Man could have been expected, in not ſufficiently diſtinguiſhing theſe Fevers from the common *Inflammatory*, adviſing the Patient to be kept out of Bed, forbidding even the moſt temperate *Alexipharmicks*, and imputing the *Malignity* of the Fever itſelf, to thoſe Remedies.

Many Scores of theſe People I have found after ſeveral Days Illneſs, in their Cloaths, crying out of extraordinary Faintneſs, with a ſcarce perceptible Pulſe, and that often intermitting; when opening the Breaſt, I have diſcover'd a ſort of pale marbling in the Skin, or a faint raſhy Appearance, by which, and the exceeding Languor attending, the Caſe now appear'd in a manner deſperate; and the Medicines which at the firſt onſet, with timely taking to the Bed, might have proved

ſucceſsful, are at this time directed to little Purpoſe.

To this eruptive of the nervous Kind, belong the *Rubeolæ*, or the red circular Spots, *inſtar Morſuum Pulicum*, ſaving that the Mark of the *Proboſcis*, in the Center, is here wanting: They are ſometimes of a deep red, at others pale or pink coloured; alſo the *Miliary*, the large *Puſtulous* and the *Petechial*: By theſe laſt, you are to underſtand thoſe brown, purple, and ſometimes livid Spots, frequently complicate with the worſt kind of the Small Pox, or attending other malignant Fevers; in which there appears a gangrenous Diſpoſition of the Blood, theſe are much leſs in their Circumference than the *Rubeolæ*, ſeldom exceeding that of a large Pin's Head, tho' both lie even with the Surface of the Skin.

As for thoſe we call *Cryſtallines*, I do not take them ſo much for Harbingers of Danger, as denoting a *Lympha* which is tenacious, and not fitted to perſpire, is detain'd by the *Cuticle*, in its excretory Ductus's ariſing from the *ſudoriferous Glands*, or thoſe which compoſe the *Papillæ Pyramidales*; and as

the ſame in cold Weather, where a Perſon thruſting up his Sleeve ſuddenly, and expoſing his Arm to the ambient Air, repreſent thoſe in a deplum'd Fowl: So when by violent Exercile, or a more than uſual covering of Bed-Cloaths, the ſame Perſon is thrown into a ſudden Sweat, the ſerous Humour ſtop'd herein, and unable by its Conſiſtence to paſs through, appears in theſe *Hydatids* or *guttulæ Cryſtallinæ*, with leſs danger or ill Symptom, when they are by themſelves; tho' they are frequently interſpers'd with the miliary Eruptions, from which they are eaſily diſtinguiſh'd by their diaphanous or tranſlucid Appearance: Theſe laſt having ſmall red Baſes and white Heads, and which, like the *Variolæ*, undergoing their ſeveral States of Crudity and Concoction, the Matter being firſt ſerous, and then ripening, the Heads crumble off by the leaſt touch of the Finger.

Sir *D——d H——n*, (whom I always thought better qualify'd for the Chirurgical Operation of Deliveries than the medical Province of Preſcription) wrote a Treatiſe ſome Years paſt profeſſedly upon this Fever, which about that Time was very popular: Whoſe

Cauſe

Cauſe he imputes *to the great Serosity and acid Acrimony of the Blood and nervous Juice*. But his *Rationale*, like that of many others, is very deficient, his Arguments unſatisfactory and inconcluſive: His Caſes every where demonſtrating too great an Opinion of his own Abilities, and too mean of thoſe of other Gentlemen who happen'd to be call'd in upon him; upon whoſe deviation from his own form or variation of Preſcription, you will find him always laying the Blame, where the Patient deceas'd, as on ſome Miſmanagement otherwiſe before he was conſulted, if the ſame Misfortune enſu'd, and he ſtood ſingly by himſelf. So that tho' his Hiſtory of this Fever may afford you ſome Entertainment, I doubt it will leave you as much in the Dark as it did myſelf, in regard to the real Nature or Eſſence thereof, or its peculiar and ſpecifical Difference, as I may ſay, from ſome other *Eruptives*.

Between the *Miliary* and the Small Pox, there is a ſort of intermediate Puſtle, attending frequently upon theſe *nervous Fevers*, and which denotes them to be *Mali Moris*. It keeps out for ſome Days, and then dies away

like the reſt, not diſappearing, and again returning, as do the marbly Appearance and *Rubeola rotunda*, from both which it differs, as it does indeed from moſt of the reſt, in a troubleſome itching; and wherever this Diſturbance goes along with an Eruption, excepting that of the Small Pox, I have obſerved there is leſs Danger, than where the Patient is altogether inſenſible thereof.

If we enquire now after the Nature, and Manner of theſe Eruptions, we ſhall find, that as in ſome others, of her *Phænomena* (whatever ſome vain Philoſophers may boaſt) *Nature* has kept them as a Secret to herſelf, and all our *Mathematiſing* or *Mechaniſing* either, is but poor Conjecture, or jejune Argumentation.

Whatever gives Riſe to them (as is very probable, ſome hidden *Diatheſis*, as *Sydenham* calls it, in the Air, rather than any of its obvious Qualities) puts the Blood under ſome new change of Texture; at leaſt upon ſuch peculiar Effervescence, as that certain Parts or Portions thereof are diſpoſed to be thrown out by the *Emunctories* of the Skin; where being detain'd by the *Cuticle*, according to their

their ſeveral Sizes and Diſpoſitions, they form various Appearances, which is all we know of her *Apparatus*, for their Excluſion; unleſs that we find them conſtantly ſpecificated to the ſame peculiar Fever, unto which they ſeverally appertain.

However, if you think your Judgment may be better inform'd by *mechanical* Solutions, take here an Explanation of one of our *mathematical* Phyſicians, Dr. *Pitcairn* *, in the following Words.

'Since the Blood is a Fluid, endow'd with 'many ſmall Parts, which can in their per-'ſpiring affect the Organs of Feeling, with 'a Senſe of Heat, the Rarifaction which al-'ways accompanies its increaſed Velocity, 'will alſo excite a greater Heat than ordinary, 'ſo as to be troubleſome both to the Patient 'and By-ſtanders: And if a ſmall part of 'the Blood only can ſqueeſe out to the Skin, 'then Puſtules or Spots ariſe, generally of a red 'Colour: By Rarifaction and Quantity of Mo-'tion, the *Serum* is ſo attenuated, as to flow 'plentifully out at the Pores; hence the Fever

* In his Elements of Phyſick, p. 111.

terminates in Sweats; if the Pores are more dilated, ſo as to receive alſo Particles of *Bile*, then the Fever will be ſolved in a Jaundice.'

Thus you have the *Mechaniſm* of the Heat, Sweats and cuticular Eruptions, attending Fevers. Whether the Philoſophy of another great Man in his Way, will be more inſtructive upon the ſame Subject, I know not, but ſhall preſent you with his Opinion thus *.

'As to the Nature and Manner of Production of theſe Spots, we aſſert in general, that all of them are the Production of the Blood and nervous Juice, ſmitten as it were by the Venom, and divided into grumous Parts, as it happens in its Circuit to be ſeiz'd on by the ſame; for as much as the animal Spirits reſiding in both Liquors, eſpecially the Blood, are no ſooner put to flight by ſome malign *Aura*, or putrid *Atoms* but a Coagulation is induced on the now diſpirited Liquors; even as Milk growing ſour and curdled by the admixtion of ſome acid Juice: Upon which Account

* *Willis* de Feb. cap. 13.

'certain

'certain Parts of the ſame thus alter'd by 'the ſaid Venom, ſeparate into Clots or 'Grumes, in like manner as Blood extrava-'ſate or let forth the Veſſels, ſoon turneth 'black, when preſently the Motion of the 'reſt is hindred, not only in the Veſſels ad-'joining, but alſo in the Heart itſelf; and 'by reaſon of the putrid Ferment, other 'Parts are ſtill liable to the ſame *Coagulum*.

'Now whatſoever is thus turned into gru-'mous Clodders, unleſs the ſame preſently be 'thrown forth, by giving a check to the Cir-'culation, muſt preſently cauſe Death; but 'being caſt out to the Circumference of the 'Body, deprived of all Spirits, and lodg'd in 'the Interſtices of the Veſſels, or their *An-'guſtiæ*, it appears on the Surface perfectly 'mortify'd, repreſenting Spots, at ſome times 'black, at others purple; or elſe having the 'Salt and Sulphur exalted by the malign and 'peſtiferous *Ferment*, it effects ſome new 'Production, and formeth Tumours of di-'vers Kinds.'

'Whilſt another * acquaints us, that the

* S. Pauli Digreſ. de Feb. Malign.

ſame Thing happens to the Maſs of Blood at theſe Times, eſpecially at the *Anaſtomoſis* of the Veins and Arteries, which befalls a frozen River, when the Froſt is broke; for as then the Ice is melted by the kindly Heat of the Sun, ſo Nature being about to ſet upon the Diſeaſe, by the Benefit of the animal Fire, and innate Heat, cooling eſpecially after the State of the Diſeaſe, and burning no more ſo preternaturally as before, melts the Blood, thicken'd and made rough by the febrile Heat in the Veins, and as it were congealing becauſe of abundance of Salt in the Extremities; and as a Torrent or River carries Fragments of Ice rapidly down the Stream, ſo the Blood in the Veins throws off ſmall Portions of this preternaturally fixed Salt, which are themſelves indeed the Spots, or at leaſt make them. *Sed*

——Quis talia fando
Temperat a Riſu?——.

Leaving theſe Speculations, as no Ways inſtructive, I come to the *Regimen* of theſe Fevers,

Fevers, which as in the foregoing, or the laſt I recited, muſt be mild and temperate, eſpecially in the beginning, if not throughout; for where there is the dry or parchy Tongue, altho' the Pulſe is low, and the Spirits languid, the Skin alſo bedew'd with a clammy *Mador*, I never could perceive good from the hot and fiery *Alexipharmicks*: So that I have always prefer'd the *Conſ. Lujul.* with the *Lap. Contrayer.* (adding ſometimes a little *Crocus*: or the *Conf. Raleighanæ* with the *Pulv. e chel. C. C.)* to the *Theriaca, Mithridatium, Serpentar.* &c. tho' at ſome times in very manifeſtly malignant Caſes, where the Sick has felt rather Cold than Hot, I have directed a Tincture of this laſt, drawn in Treacle Water, after the following Manner, to be given by Spoonfuls.

℞ *Rad. Serpentar. Virg.* ʒij. *Contrayer.* ʒj. *Coccinel* ℈j.

Infunde in aq. Theriacalis ʒvj. *& Colaturæ addendo Syr. Croci* ʒſſ. *f. Mixtura, cujus Capiat Cochl. duo Bolorum vel Hauſtuum Spatiis intermediis.*

To the ſame Purpoſe, as I ſaid before, I allow

allow a Glaſs of Wine rather than a Draught of the *Aqua frigida*, in his Sweats.

When I am call'd early to theſe Fevers, and find the Sick complaining of a *Nauſea*, I immediately preſcribe a Vomit of the *Indian Root*, or *Rad. Ipecacuhannæ*; After which, the Patient being put to Bed, a Bliſter is to be laid between his Shoulders, not only for the Relief of his Head, but for the Security of his Nerves, from the malign Quality of the Fever.

The Vomiting over, ſome temperate *Alexipharmic* is given him, ſuch as I have now mention'd; or as the Pulſe ſhall dictate, together with the Temper in which I find him as to Heat or Chill: Some Days after, I frequently diſcover the Eruption, which perhaps kept out of ſight, for want of being in his Bed, till now; but by the ſighing, low Pulſe, unuſual Faintneſs, and ſinking about the Heart, to which the Patient points, I can eaſily preſage to what Species the Fever belongs: which difficult and interrupted manner of Reſpiration, with the Sickneſs and Languor, are the true *Characteriſtics*, and as it were *pathognomonical* to an eruptive Fever, either

either *Rubeolæ* or *Miliary*, as the Cough, Sneezing and watery Eye to the Meaſles, or the *Lumbago*, Vomiting and Head-ach to the Small Pox; nor have I, unleſs rarely, been deceiv'd in my Expectation.

After this, if the Appearance keeps up, or the Raſh holds freſh and red, the Patient ſeeming leſs oppreſt, I go on as before; but when I perceive it of a ſudden growing pale, faint and retroceding, I appoint two more Bliſters for the inſide of the Arms, above the Elbows; and the next Day, if no Sweat breaks out, but that his Skin is dry, as alſo his Tongue, his Eye red, or the Blood crowded in the Arteries thereof, (a very diſcouraging Symptom) two more behind his Ears, reaching to the ſides of his Neck. I alſo leech the Temples, and ſhave his Head; which, tho' not pain'd after the manner of a common *Cephalalgy*, yet if I find him in great Confuſion, looking as it were hurried, and muttering ſomewhat out of the way, like a Perſon in a Dream, tho' his Eyes are wide open, and he gets no reſt, lies as it were ſtupid, and calls for nothing: At theſe Times, as I ſhall take notice preſently, I think

think I have known Benefit accrue from an *Epiſpaſtic* continued ſome Days upon the back part of the Head.

And thus I go on with the ſame temperate *Regimen*, only varying the Form, as I ſee needful, and once at leaſt in 48 Hours applying freſh Bliſters to ſeveral Parts, till I perceive ſome ſign of Concoction in the Urine, and a critical Sweat appear; which continuing, gives a turn for the better, the Eruption all this while keeping out, and running its uſual Stage, according to the genius of the Fever, from ſeven to fourteen, nay, one and twenty Days, as the *Miliary* will hold out, and then dry away of themſelves; nor am I all this while ſolicitous about Stools, rather guarding againſt looſe ones: However if the Patient is very hot and reſtleſs, with Head-ach accompanying, I allow of Milk and Sugar to be thrown up as a Clyſter, once in three or four Days; if the exceeding weakneſs of the Pulſe does not contra-indicate.

About the Cloſe, when every Thing ſeem'd to take a fatal Turn, you have frequently an *Aphthæ*, which may be conjectur'd coming on, from the great Dryneſs of all Parts of

the

the *Fauces*; but eſpecially, thoſe more backward, attended with ſome Difficulty in the Patient's paſſing off his Liquors: When this proves white, and ſeparates kindly, after few Days, he has ſtill a good chance for an Eſcape: But if black, ſhining or glaſſy, ſpreading farther over the *Palate*, too long durable; or if caſting off, returning again, there is little to be expected as to Recovery.

This Thruſh is not to be meddled with, but ſuffer'd, like Fruit duly ripened, to fall off itſelf; nor can I adviſe any Thing unleſs a little of the warm pectoral Decoction, to be thrown in at theſe Times: For Nature, who has found out the way of this particular *Criſis*, will, in her own Time, beſt fit it for throwing off, which Art may poſſibly interrupt, by a too haſty Separation, from the Uſe of maturating *Gargariſms*, or fix them faſter by *reſtringent* ones.

As the *Aphthæ*, thus appearing of a mild and tractable Diſpoſition, has ranſom'd many, ſo others, as I have already noted, after a deſperate Struggle of ſome Days, the Fever taking the Type of an *Intermittent*, have thereby eſcaped; of which, with the Method of its

Exhibi-

Exhibition, and the time of taking off the ſame, by the *Cortex*, I have already made mention. But when neither of theſe preſent, and that the Pulſe ſtill flags, the *Tremor* encreaſes with *Subſultus*, the Tongue falters, he lets go his Urine, falls into a *Coma*, the Features ſink, as does the Sick down in his Bed, he gathers up the Cloaths, picking them with his Fingers, his extreme Parts are cold, as are his Sweats: What Hopes remain? Or what can we preſcribe, that will avail? Yet even here you muſt not give him up as abſolutely loſt, how great ſoever may be the odds againſt him, for Reaſons with which you ſhall be preſently acquainted.

Theſe, Sir, are the Fevers which have ravaged our City of *London*, through all the Quatters of the Year, for many of theſe paſt. Theſe have been a ſort of *ſtationary* Fever with us, whatever *Intercurrents* have paſſed between: And at ſome times, as I may ſay, *Epidemical* among us: Theſe like a milder *Peſt*, have carry'd off great Numbers of our Inhabitants, inſomuch that ſcarce a quarter Part, who have been thus ſeized, whatever Management they underwent, have recover'd

from

from the ſame; or if they have, *(ex Luto quaſi Meliore formati)* they have been indebted, (as remark'd above) to an *Aphthæ*, or elſe the Fever of itſelf, fortunately changing from a Συνοχὸς to a Συνοχὶς, and either gradually, perſpiring off its *Fomes*, or coming to intermit, has had its Ferment extinguiſh'd by the *Cortex*.

Nor truly can I ſay by way of *Prognoſtick*, that I could ever gain much Aſſiſtance from *Uroſcopy*, at theſe Times, ſo as to form any certain *Præſagium* thereby; for this at ſome times appears pale and crude; ſometimes wheyiſh, at others turbid; often a promiſing *Enœorema*, ſometimes the Appearance of an *Hypoſtaſis*: Whilſt yet the Fever ſtill goes on. How frequently are we deceived by an offer therein towards the *lateritious* Sediment, with the reſemblance of a *Paroxyſm*, ſuch as the Chill, the Yawn, the Heat and Sweats? yet all ſuddenly going off, and in one Night's time changed for the worſe, with *Subſultus*, *Delirium*, *Spaſm*, and the direful train of nervous Symptoms, preſently ſucceeding.

So fickle are our curative Indications: So inſcrutable Nature in her Turns and Changes,

who ſcarce leaves any Thing but the Pulſe to guide us, and that too, (tho' not ſo often) ſometimes fails us.

The next I intend to ſpeak to, is the *intermitting* Fever, which I have differenced before, as *primary* and *ſecondary*: And this laſt I have already obſerved, where I took notice that by the ſame, was to be underſtood any of the *continent* Kind, taking the Shape thereof, and admitting the ſame Cure, *viz.* the common *Febrifuge*. By the *Primary*, you are to underſtand what our People call an *Ague*: A Diſtemper ſo well known, as to want no Deſcription; tho' in its Cauſe, at leaſt its Appearances, and Returns with the *Gnomon* on the Dial to the ſame Hour, as intricate (if not more ſo) as the reſt.

No wonder then that in the Ages of Ignorance and Superſtition, a Diſeaſe that carry'd ſo much reſemblance of *Inchantment*, ſhould be ſet upon by *Charms* and *Incantations*: Or that Phyſicians themſelves ſhould give into the ſame, as they did in others, where there ſeemed more of the θεῖον τι or unaccountable: As the *Epilepſy*, which was named *Morbus Divinus*, alſo *Paſſio Sacra*,

the *Chorea Sancti Viti*, and the *Plague*, with ſundry others, undertaken the ſame way: Hence alſo the Riſe of *Amulets*, with the *Pericarpia*, ſtill in uſe among ſome, and countenanc'd by the Succeſs of Experiments luckily tim'd, the Diſeaſe going off at that juncture, or owing meerly to the force of Imagination impreſſing the Spirits, and thereby giving ſuch ſurpriſing turn to the Humours, that many have been thus freed, inſenſibly as it were from theſe Diſtempers.

Having mentioned the *Chorea*, I ſhall here give the Deſcription thereof, from *Sydenham*, which I take to be the moſt graphical any where to be met with; and of which he tells us, he cured five Children by bleeding and purging alternately for a little time, and then ordering ſome Remedies, he has enter'd in the ſame Place, for ſtrengthening the *nervous Genus*.

'*Chorea Sancti Viti* (in our Author's Words) 'is an odd ſort of Convulſion which chiefly 'invades Boys and Girls, from ten Years of 'Age to Puberty: Firſt it ſhews itſelf by a 'certain Lameneſs, or rather Inſtability of one 'of the Legs, which the Patient drags after

'him like a Fool: After in the Hand of 'the ſame ſide, which he can by no means 'keep in the ſame Poſture for one Moment, 'if it be brought to the Breaſt or any other 'Part, but it will be diſtorted to another 'poſition or place, by a certain Convulſion, 'let the Patient do what he can. If a Cup 'of Drink be put into his Hand, he repre-'ſents a thouſand Geſtures, like Juglers, be-'fore he brings it to his Mouth; for where-'as he cannot carry it in a right Line to 'the ſame, his Hand being drawn hither and 'thither by the Convulſion, he turns it often 'about for ſome time, till at length happily 'reaching his Lips, he flings it ſuddenly into 'his Mouth, and drinks it haſtily, as if the 'poor Creature deſign'd only to make Sport.

Proceeding now, I need not tell you, what a Handle this has been made of late, to abuſe our credulous People, with *Necklaces* to haſten the cutting of their Children's Teeth, together with a *febrifuge* Liquid, bound upon the carpal Artery, to remove all ſorts of Fevers, without other Medicines; *Gout Stones* to be carried in their Pockets, when the Vender has pickt the Money out; with others

as ridiculous, our News Papers are daily full of; but in an Age of ſo much Light and new Diſcovery, 'tis leſs admirable theſe *Phænomena* of *Agues* ſhould be *mechanically* ſolved, at leaſt attempted, whether truly or not I will not ſay: But this I am ſure I may, that their Cure, by a lucky Diſcovery, is now more ſucceſsfully enterprized than heretofore: When the Cauſe being placed in ſome certain Humour of the Blood, as *Phlegm*, *Choler*, *Melancholy*, giving riſe to the divers Returns, *viz.* daily, every third or fourth, ſo much Time was taken up in preparing the ſaid Humours, by ſome aperient Medicines, before they were fitted for Evacuation, by *ſpecific Cathartick*s alſo, as the *Phlegmagogue*, *Cholagogue*, and *Melanagogue* Draughts, or Apoſems: That the Sick was hereby miſerably haras'd between his Diſtemper and his Doctor, and at length ſometimes deſtroy'd; inſomuch that the *intermitting* Fever was in thoſe Days as truly an *Opprobrium* to the Phyſician, as the *Gout* in ours. And if the Patient was at length ſet free, as by the advance of the Spring Seaſon, the Strength of

Nature, or otherwiſe, it was often rather owing to her, than the Undertaker.

But now a Word or two in the way of Explanation of the Symptoms of an *Intermittent*, which I ſhall give you firſt from one of our principal *Mechanicians*, Dr. *Pitcairn*, who in his *Elements* lays down the following, founded upon *Bellini*'s 20th *Propoſition in his Tract. de Feb.*

'The ſenſe of Cold in the attack of an 'Intermittent, muſt proceed either from the 'Obſtructions of the capillary Veſſels, about 'the Extremities of the Body, or from the 'Blood's being too thick in thoſe Parts: 'But ſince the Pulſe is alſo low, or the 'Artery but weakly diſtended, the Blood 'muſt be leſs rarify'd; whence that Obſtruction is neceſſarily from too great a thickneſs 'of the Blood: But when the Heat afterwards ariſes, the Lentor being waſhed out 'of the Arteries, into larger Veins, where 'there is more room for Rarifaction, and 'from thence into the Heart and Lungs; 'and the Heat being perceived in the Parts 'neareſt the Heart, where the Velocity is 'greateſt, ſooner than in the Extremities,

'and

'and moſt remote Parts: It is manifeſt that 'the Motion and Rarifaction of the Blood 'is increaſed; whereby the obſtructing Viſ- 'cidities being broken, Sweat breaks out, 'and there is an end or determination of the 'Fit.'

Farther, as to the ſtated Returns, the *Criticon* tells us, that the febrile Matter, which is put off thus periodically in different Individuals, cannot be capable of equal Attenuation, in equal Times: Some requiring four, others ten, others twenty Days, before it is ripen'd, and comes to its ſtate of Excluſion, which holds true in *continual* Fevers, requiring the ſame Space in the whole, tho' interrupted, or at different Times, which *Sydenham* had formerly remark'd, and whence our Author has borrow'd the ſame; we may conclude the Blood's mixture ſo very heterogenous, as to contain ſeveral Quantities of this Matter, each having its different Degrees of Coheſion, altho' of the ſame Species: One Parcel of which is already fit for Excluſion; another not till to-morrow at the ſame time or longer: Hence the exactneſs of Turn, and the due diſtance of Fits: hence *Tertians*

change into *Quotidians* at ſome times, and *vice verſa*: hence it is we often ſee ſix or ſeven Fits and no more: hence its longer Duration from a greater Quantity of theſe unequal Coheſions, requiring exactly ſo many Circulations, before their Maturation: So that ſuppoſe a Perſon *(taking in a little Algebra)* ſeized with a *Tertian*, and that the Quantities of Matter be expreſſed in the Letters following, *a*, *b*, *c*, *d*, *e*, *f*, *g*; let us ſuppoſe *(for we are ſtill in the way of Suppoſition)* the Particle *a* to begin on *Monday*, then the Particle *g* will produce a Fit on the *Saturday* ſev'n-night; if they are cur'd at *g*, then *g* has required fifteen Days Maturation, and therefore muſt *a* too; hence it is we are often diſorder'd for ſome Days before Fevers and Agues *.

Again, ſaith he, ſome deny that there is an *acid* in the Blood, altho' the ſame is apparent to the Senſes, in ſeveral of the Humours ſecreted thence; by which being coagulated, there ariſeth this Senſe of Cold in Horrors; and the Reaſon why it returns pe-

* Criticon Febrium, p. 83.

riodically,

riodically, Dr. *Willis* will have owing to a certain Quantity of the depraved Juices, neceſſary to produce a *Paroxyſm*; and that ſuch Quantity is gather'd at a ſtated Time, according to the genius of the *Intermittent*, as in one Day, two or three.

The laſt Opinion I ſhall quote here, relating to the regular Returns of theſe Fevers, ſhall be that of *Helvetius* *, 'who placing 'the Cauſe of Fevers in general, as we have 'formerly obſerved in the *lymphatic Juice*, 'clog'd with ſome foreign Humours, which 'flowing into the Veſſels of the *primæ viæ*, 'come after to mix with the Blood: Firſt, 'thickning it by Means of that Sourneſs and 'Crudity they bring along with them; by 'which its fermentative Motion is abated, 'and conſequently the Heat of the Parts, 'with the Strength of the Pulſe; thence 'ſucceeds the Coldneſs with ſlowneſs thereof, 'ſhivering, yawning with other Symptoms, 'which go before the *Paroxyſm* of an *inter-'mitting* Fever. This is the State which is 'called the *cold Fit*; at this time the Hu-

* Eſſay p. 20.

'mours in the Blood cannot long circulate, 'but they muſt diſſolve and meet with a 'number of Particles diſpoſed to ferment: 'They therefore cauſe a Fermentation, whoſe 'briſkneſs is in proportion to their Quantity: 'This is what kindles the Fever and renders 'it more or leſs burning: And when all 'theſe Particles have boiled for ſome time, 'and have no longer a Diſpoſition to ferment 'together, the Juices ceaſe to be agitated, 'their Tumult is quieted, and their natural 'State returns. During the *Paroxyſm*, theſe 'indigeſted Humours, which were intangled 'in a thick *Lympha*, and detain'd in the '*lymphatic* Veſſels, do not ſufficiently par-'take of the general Motion of all 'the Fluids; ſo that what paſſes in the 'Blood, is not able to diſſolve them, they 'requiring a fixed and limited time for their 'Digeſtion and Diſſolution: And this is 'what makes the *Type* of intermitting Fevers 'ſo regular; ſo that the difference between 'the *continual* and *intermitting* Fever, con-'ſiſts in this (*if we may credit this French* '*Author*) that in the firſt, the Humours are 'thinner and more diſingaged than in the 'laſt,

'laſt, hence thoſe continue to diſingage 'themſelves without Interruption; whilſt 'theſe cannot, unleſs at ſtated Times or re-'gular Periods.'

What ſort of *Mechaniſm*, or what *Philoſophy* we have here, to ſolve the *Phænomena* of *intermitting Fevers* or *Agues*, I ſhall leave you to judge: Whilſt on my own part, notwithſtanding all that has been here recited, I muſt ſtill believe the ſame one of Nature's *Arcana*, or hidden Myſteries, and however *mechanically* tranſacted in the Blood, yet ſcarce *mathematically* to be ſolved, as to the real *Modus*. Nor do I conceive it of great moment to pry farther thereinto, ſince a kind Providence has directed us to an *Antidote ſpecifical*, if any Thing can deſerve the Name (*viz.* the *Cortex*) or by which the Diſeaſe is ſubdued, as we ſay, at once; the manner of whoſe Exhibition has been ſo well deliver'd by *Sydenham* and others, and ſo continually in Uſe among us, that I may doubtleſs ſave myſelf the trouble of more Words about it. I am ſure no *Theory* nor *Hypotheſis*, either *Phyſical* or *Mechanical*, gave the firſt hint of this divine Remedy, which was found out meerly by *Obſervation*;

ſervation; and from repeated Trial, brought into Practice: but after the ſame is once diſcover'd, we then go upon ſolving *Problems*. Thus according to one of theſe *, *whatever hinders Coagulation of the Blood, will cure theſe Fevers; and if you bleed upon the Cortex, the Blood will keep its Fluidity: The like of Crab's Eyes, Sal Abſynth. & Armon. which hinder the Blood's Coagulation.* Yet theſe, I fear, unleſs very rarely, ſtop the Fits of the ſame Fever; however if by their property of preſerving the Fluidity of the Blood, this Alteration is effected, how comes it that *Alum*, of which this Gentleman makes mention, among ſome other *Febrifuges*, ſo frequently produces the like? Whence others have, with more Reaſon, taken up a Perſuaſion, that the Cure is here brought about by its Power of conſtipating, or locking up the *Ferment*, that gives Riſe thereto; and this is doubtleſs very plain to our daily Obſervation, that we have not a more noble *Iſchæma*, or *blood Stauncher*, where the ſame ariſes from any inward Breach of the Veſſel, or ſweat-

* Idem Ibid.

ing

ing through by Reaſon of its Acrimony and Tenuity, eſpecially if attended with a feverish Heat, than this of the *Cortex*: So vain and precarious are moſt of our *Hypotheſes*; ſo diverſe and diſagreeable our Argumentation about ſome phyſical Appearances: from which we may obtain indeed this Satisfaction, that both the Nature or real Eſſence of moſt Diſeaſes, as well as the manner of the Operation of Medicines, or the Remedies which ſubdue them, are often conceal'd from us: And that we ought to be exceeding cautious, leſt in attempting the Solution of ſuch *Problems*, as Nature herſelf has not ſufficiently diſcover'd to us, we do not lay open our own Ignorance inſtead of her Tranſactions.

This one Thing however let me farther adviſe, with reſpect to the *Bark*, that before you give it, the Stomach be well cleanſed of its ſlimy Contents, by a Vomit, the Morning or Evening before the Fit; and indeed I think it were much to be wiſhed, that we were Maſters of ſome Preparation thereof, that might conceal it from the Knowledge of the Patient, and render it more facile to be taken by ſome of theſe. As no ſmall Advantage

vantage might accrue hereby to *Pharmacy*, ſo likewiſe to certain prejudiced People, who are to be cheated into Health, and will by no Means admit of it knowingly, altho' we cannot otherways help them.

The *Infuſions* or *Tinctures* and *Decoctions* thereof, as alſo the Reſine I have try'd often, but I cannot ſay with that Certainty and Dependence, as when taken in the Subſtance.

I have ſeen alſo an *Extract* here in Town, that has anſwered much better than either of the former; but it is difficult to hit rightly, or preſerve a due Conſiſtence, with full Energy; being ſo apt to grow dry and reſinous, and to crumble, unleſs moiſten'd with Spirit of Wine, ſo as to form it into Pills.

Some put a large Quantity, as two or three Pound of the beſt *Bark* groſly powder'd, into a ſuitable one of rectify'd Spirit: Which having placed in *Balneo*, the reſinous Parts are then diſſolved, and a deep rubicund Tincture drawn; after which the *Fæces* are boiled in a watery *Menſtruum*, to get forth its ſtiptic Parts, which being ſtrongly expreſt, and

the greateſt part of the Spirit drawn off, in order to preſerve the ſame for the like or other Purpoſes, the remaining *Tincture* is mix'd with this *Expreſſion*, and gradually evaporated to an *Extract*, a Scruple of which in three Pills, or half a Dram at moſt in four, for grown Perſons; with half this Quantity for Children, has anſwer'd double the ſame of the Powder.

Whether the *Magma* calcin'd, would afford any Quantity of *fix'd Salt*, I know not, never ſeeing it try'd; but if it would, and were added to the *Extract*, as in *Raleigh's Confection*, it would, if no otherwiſe, certainly contribute to keep it from growing hard, and ſo very brittle, as will any other *Alkaline Salt*.

Of near Reſemblance to the foregoing, or much the ſame, is this enſuing Recipe from Dr. *Pitcairn*, which he terms a *French Preparation* thereof: And gives from ʒß to ʒi. four Doſes, in the interval of the *Paroxyſm*: Having once or oftner vomited the Patient, before the Exhibition thereof.

℞. *Cort. Peru craſſo modo pulv.* ℔j. *Indatur Matracio, & affunde Spir. Vini* ℔ij.

℔ij. *Sit vas tertia parte vacuum, quod ſæpius debet agitari. Sitet bene clauſum in Arena moderate calida, frequenter, ut dictum eſt, concutiendo: & cum Spiritus purpureum Colorem acquiſiverit (Signum Solutionis partium Corticis reſinoſarum) augeatur Calor, adhuc continuando donec Menſtruum plene ſaturatum eſt: dein frigeſcat vas, & colatur Tinctura bis terve per pannum lineum, fortiter exprimendo, & infunde Colaturam in phialam alteram. Indatur reſiduum in Matraclum, & iterum colloca ſuper Arenam calidam, tunc affunde Vini Gallici* ℔ij, *& concute ut antea: cum tam Colore quam Sapore, apparet Salinas partes Corticis abſorberi, coletur ut prius. Miſceantur liquores, & una indantur vitreo Cucurbito ſuper Calorem temperatum, evaporentur, dum partes reſinoſæ lateribus vaſculi adhærentes, removentur, ut in fundum ſubſideant; & tandem cum pars major humiditatis hoc modo ſit abſumpta, infunde reſiduum in vitreum vaſem, ſuper Arenam ponendo, & addendo* ℥iij. *Syr. e ſuco Chermes, leni agitatione*

&

& Calore evaporetur reliqua pars humiditatis ad Conſiſtentiam Extracti.

To each Doſe of this Extract, or each other, if a *Diarrhœa* happens, may be added half a Grain or a Grain of the *Extract. Thebaic.*

A thin Extract alſo of Gentian Root with Chamomile Flowers, he ſays, may be ſubſtituted in the Place of the foregoing, where that ſucceeds not; or this Mixture of *Dekker's*, cry'd up by ſome.

℞ *Cort. Lign. Guaj. Fraxin. ana* ʒj. *Extr. Rad. Angel. Gentian. Antimon. Diaphoret. ſal. Vol. Armon. ana* ʒi. *Myrrh.* ʒij. *m. f. Pulvis in octo Chartulas.*

The following from *Fuller*, I have known ſometimes take Place, when the *Bark* has been ineffectual.

℞ *Sal. Abſinth.* ʒß. *Antimon. Diaphoret.* ʒj. *flor. Chamomel.* ʒiſſß. *m. f. pulvis in tenuem (vix.) octo Chartas.*

Or this more ſimple which I much prefer.

℞ *pulv. flor. Chamomel. Sal. Abſinth ana* ℈j. *Ol. Nuc. Moſc. gut. i. Syr. e Cort. Aurant. q. ſ. m. f. Bolus ſumendus et repetendus quarta vel quinque quaque hora per dies aliquot.*

Bates has another, which he calls *Febrifugus certus*, vide *Pharm. Bat.*

The *Empirical* Cure is this, which has often anſwer'd, and was a great Secret with Dr. *Brooks*.

℞ *Aluminis* ℈j. *Nuc. Moſc. pulv.* ℈ij. *Sacchar.* ℈ß. *m. f. Pulvis dandus quarta quaque hora cum quolibet Vehiculo in intervallo Paroxyſmi, vomitorio præcedenti.*

To the *Intermittent* appertains an *Anomalous* one, frequently obſerved in thoſe Seaſons, where the Genius of the *ſtationary Fever* inclines that Way, or becomes *Epidemical*, which it muſt ſurely have been about the time when Dr. *Morton* pen'd his Obſervations.

It is called *Anomalous*, not for its irregular Returns, but its appearance like a Counterfeit, under the ſhape of ſome other Diſeaſe, as Head-ach, Pain in the Side, Colick, Cholera, Nephritic Illneſs: Nay, even a Tooth-ach and Ophthalmy, which I have ſeen ſeveral Times coming periodically, and miſerably afflicting the Patient for many Hours, then leaving him till the next return: So that indeed in every Illneſs afflicting the Body at ſtated Periods or Intervals, altho' the uſual Symptoms of Shivering, Heat, or Sweats, do not appear, this Remedy ought to be tried, and rarely fails, eſpecially where the Urine, by its brick-duſt Sediment, betrays this *Proteus* like Enemy, or conceal'd Ferment, to be got into the Blood: And ſurely thoſe Practitioners know very little of this Drug, who uſe the ſame no otherwiſe than as a *Febrifuge* for *Agues* and *intermitting* Fevers: Since there is ſcarce a better Remedy to be met with, for giving a Sprightlineſs or new Life, as it were, to the feeble and impoveriſh'd ſtate of the Blood, to bind up its lax Texture, and ſecure it from breaking forth its Boundaries, when by its Heat and Acri-

many (as we have remark'd before) it is liable thereunto: Nor in *hyſterical* and *hypochondriacal* Caſes, when a Conſtitution has been ſhatter'd by ſome *chronical* Illneſs, whereby both Solids and Fluids have been much weaken'd in their Tone, have we a more noble corroborative or reſtorative Medicine, than the Bark, given in proper Quantities, and at due diſtances of Time.

This farther I would alſo have you take Notice of, as you may of *Opium*, *viz.* where there is a proper Indication for them, there is hardly any thing to contra-indicate their Uſe.

Thus as no Man in his Senſes would venture an *aſthmatic* Perſon, at other Times, with a Grain of *Opium*, or a Dram of the *Cortex*, by reaſon of their conſtipating or incraſſating Qualities: Yet in a very extreme Colick, or other Spaſm, as the former muſt be directed, ſo to put by the *Paroxyſm* of a regular *Intermittent*, we may alſo ſafely adminiſter the latter.

"As to the Uſe of the firſt of theſe in "*Fevers*, take the following Remark from "*Sydenham*, *viz.* That from a faithful Col-

"lection

" lection of many Obſervations, he had " found, that in the beginning State, and " much more in the increaſe of the *Fever*, " they did no good, how great ſoever ſeem- " ingly the Occaſion, as in *Phrenetis*, and " conſtant *Vigil*, but in the decline of the " Diſtemper, as on the 12th Day, and ſtill " better on the 14th, if Care be taken that " the ſame be not heigthen'd by *Cordials* and " a hot *Regimen*, they were adminiſter'd with " Succeſs: This only by the way.

The laſt of the Fevers I ſhall touch upon, ſhall be the *Hectick*, which the beſt Writer upon that Subject, Dr. *Moreton* *, has diſtinguiſh'd as *original* and *ſymptomatical*: The firſt of theſe he tells us is alſo divided into two, an *Atrophy* and a *Conſumption of the Lungs*.

But whoever rightly conſiders, will find few Inſtances of this Diſtemper, which are not ſome way *ſymptomatical*, or that take not their Riſe from ſome preceding Illneſs.

Thus when a Tubercle, one or more (as I have already obſerv'd) through Obſtruction of

* Phthiſiologia.

ſome excretory Ducts, formed in the veſiculous Subſtance of the Lungs, increaſes and begets a Difficulty in breathing, which after a while inflaming, a *Symptomatic* Fever is occaſion'd, till at length impoſtumating, the Blood being tainted or imbued with certain purulent Particles in its Paſſage, a *putrid Fever* as formerly obſerved accedes to the *Inflammatory*, with all the dire Train of Symptoms following, and gives riſe to this particular Denomination of a *Conſumption of the Lungs*, becauſe that is the Organ where the Malady began; but if the like Apoſteme, whether by Stones or Inflammation otherwiſe ſtirred up, is formed in the Kidney (a Caſe very common) there is ſurely as much Reaſon to term this a Conſumption of that Part; or ſuppoſe in any other *Viſcus*, than which nothing more ſo, and attended with the like miſchievous Symptoms, as polluting the Blood, kindling a Flame therein, *&c.* Why, I ſay, may not theſe, by the ſame Right, be named Conſumptions of the ſeveral Bowels where the Abſceſs is firſt form'd, and by which the Blood and nervous Fluid are in like Manner vitiated and render'd unfit

to be aſſimilated in the Way of Nutrition, or ſupply of the daily Waſte upon the Parts?

I own the Apoſteme of the Lungs, being the moſt common on the Account of its ſpongy and lax Texture, liable to be ſtuft with fuliginous Recrements, and foreign Corpuſcles drawn in with the Air, and a Breach in its Subſtance, through the conſtant Motion in Reſpiration, hardly, if ever, conſolidated: This, I ſay therefore, in the Way of *Emphaſis*, is called a *Conſumption*, and that *original*, tho' no more ſo, than thoſe from *Abſceſſes* elſewhere, which take their Riſe from ſome other Diſtempers going before; ſuch as the *Scrofula* or *Struma*, the *Scurvy* or other ſaline *Diſcraſy* in the Juices of the Blood, internal *Hæmorrhages* from a Solution of Continuity in ſome of the Parts, by which the Veſſels are laid open; the *Lues Venerea*, *Fiſtula's*, the Conſequence of ſome inward Apoſtemation, which cannot be healed, nor with Safety laid open; *Cachexies* or *Chloroſes*, with whatever heaps up Obſtructions in the *Meſentery*, whereby the chylous Liquor is either ſoured, intercepted, or work'd up, by

Means thereof, into a putrid and preternatural Effervescence, destroying the Balsam of the Blood, and kindling this particular Fever, which being slow and lingering, the Patient is often deluded with vain Hopes of his Recovery, when his Case, to the discerning Physician, is truly hopeless and incurable: But of this before, in our general Division of *Fevers*.

The nervous *Atrophy* takes its Rise more particularly from some Defect in the Fluid of the Nerves; for as this, together with that of the Blood, seem to contribute to the Motion of the Body, as is manifest by the Ligature made upon the great Artery, by which the Passage thereof is hinder'd to the Limbs, as well as on those of the Nerves, whereby the Parts below are deprived of the same, so both surely have their Share in its Nourishment; and as the latter, polluted some how, or vitiated in its *Crasis*, gives rise to the hectical Disorders of which we are now speaking, and have already enumerated; so the first, after a more peculiar Manner, is concerned in those we call *Consumptions* of the *Nerves*, or *nervous Atrophies*, derived from the

Greek,

Greek, ex a particula privativa, & τρέφω nutrio, i. e. without Nouriſhment, the Diſtinction between which two is ſo abſolutely neceſſary, that unleſs he obſerves the ſame, no Man can direct a proper Regimen for the Cure, which is (at leaſt ought to be) as different as that of the *ſanguineous* and *nervous Fever.*

For as the *Conſumption*, ſo call'd, of the *Lungs*, and others, proceeding from Inflammation or *Abſceſs*, which lay the Foundation for what we call a *Hectick*, fixing upon the Habit of the Body in general; as theſe, I ſay, require the moſt temperate, humecting, refrigerating and edulcorating Remedies, to ſoften the *acrid* Humours, and extinguiſh this predatory Fire kindled therein; ſuch, for Inſtance, as the *Sarſa* and *China Decoctions*, the *Abſorbentia*, with the *Aſs's Milk*, *Almond Emulſions*, and the *Milk Diet* in general; ſo the *nervous*, in which the Sick complains rather of Cold than Heat, calls for a warmer Method, as *Chalybeats* and *Bitters*, to comfort and fortify the Digeſtion, and mend the Appetite, which being, as it were, pall'd, is neither craving for Food,

nor able to concoct rightly what is receiv'd. Hence in general the *Atrophia Partium* is a Conſequence of the *Atonia Nervorum*, and the *Maraſmus* enſuing theſe *Conſumptions*, owing, as I ſaid but now, rather to ſome Fault in the *nervous*, than *ſanguineous* Fluid, taking its Beginning oftentimes from Grief, Melancholy, or ſome other Paſſion, without a Treſpaſs in the other *Nonnaturals*; ſo that after all, it may be made a Queſtion, whether we have any Conſumptions *original*, unleſs the *hereditary*, or thoſe which from the Parent are impreſt on the *Prima Stamina Vitæ*, in the *Offspring Fœtus*.

From both, however, whether *ſanguineous* or *nervous Conſumptions*, we may, in the Way of *Corollary*, make this juſt Obſervation; that ſince there is no ſolid Part of the *Animal Compage* deſtroy'd thereby, the moſt thin and meager Perſon having the ſame Number of Muſcles and Membranes as the corpulent, not a ſingle Fibre, unleſs in the Caſe of Ulcers, either external or internal, deſtroy'd, all which is loſt in Weight being the *Parenchyma* ſo call'd, made up of divers Liquors, lodg'd in their ſeveral Veſicles or Cells, together with

with the Fluids paſſing in their proper Pipes: Theſe, I ſay, which like a *Tomentum* or Stuffing, give bulk as well to the Muſcles as to the Viſcera, and other the contain'd Parts, now waſted, dry'd up, or drain'd away, their membranous Encloſures coincide, as do the *Veſiculæ* themſelves, leaving little other than dry Skins and Fibres; a plain Indication, ſurely, that the whole Body, excepting the more ſtable Parts, the Bones, is really *vaſcular*, and that the Cure of a *Pthiſis*, or, indeed, every *Conſumption*, taking the Word in its greateſt Latitude, or vulgar Acceptation, is only by a ſupply of freſh Juices to recruit or fill up theſe *Veſiculæ*, and repair the Waſte, if we knew which Way the ſame might be accompliſh'd; and this poſſibly contains as much of the uſeful *Mechaniſm*, at theſe times, as is neceſſary we ſhould be acquainted with.

We have had many Treatiſes of late publiſh'd upon this Topic of *Conſumptions*, with what View, I mean whether to the public Good or private Gain? let the Performances ſpeak for themſelves: But you know, Doctor, that it has been too much in Uſe, for ſome of much Leiſure or little Buſineſs, to

ſingle

ſingle out a popular Diſtemper, on which to harangue, no Matter how, in Expectation that the Sick of ſuch Diſeaſe may be thereby allur'd to conſult them; the Title Page of which being often adverti's'd, ſupplies the Place of a *Quack-Bill*: But ſince I underſtand this particular one of the *Conſumption* has been lately handled by a *Mechanician*, and all the ſeveral Gradations thereof, explain'd by *Newtonian Principles*, I will hope at leaſt we may live to ſee this cruel Article left out of our *Weekly ones*, by which certainly more Honour will redound to our new *Microcoſmeter*, as well as Emolument to the whole Kingdom, than has ever happen'd ſince the Foundation of *Coos*, renowned for the Births of thoſe two great Men in their Profeſſions, *Hippocrates* and *Apelles*.

I ſhall now take the Liberty to break off the Thread of my Diſcourſe concerning *Fevers*, either in *general* or *particular*, which yet, to render as uſeful as I can, I would not, methinks, leave without ſome farther Hints as to thoſe common Evacuations, practis'd in their Cure, and taken from the Method which Nature has been obſerv'd to uſe her-

ſelf, as I find them ſumm'd up by Dr. *Freind* *, in the Manner following.

The Evacuations, ſaith he, which *Hippocrates* obſerv'd to fall out among thoſe he attended under *Fevers*, were theſe following, *Bleeding*, *Sweating*, *Vomiting*, *Abſceſs*, *Spitting*, *Stools*, and *Urine*.

Theſe are ſet down as Marks for our Imitation, whereby to relieve *Nature* oppreſs'd, in ſuch Way as ſhe ſeems to have indicated herſelf.

As to the firſt, by what Part ſoever, if the Eruption of the Blood be *critical*, as ſometimes falls out, we are hereby encouraged in Fevers, eſpecially of the *inflammatory Species*, to draw off the ſame in ſuch Quantity as the Patient's Strength will allow, and indeed in Caſes of *Repletion*, or where there is *Plethora*, either *general* or *particular*, by which the Veſſels are diſtended from the Quantity or Rarifaction of the circulating Fluid, what can be the Remedy, unleſs *Depletion* of the ſame, or *Inanition*, to ſuch a Degree as the Pulſe directs? Which at the

* Comment. de Febribus.

Begin-

Beginning of the Seizure, whilſt this is ſtrong and high, may be done with Safety; or if ſeemingly depreſt from Fullneſs of the ſaid Veſſels, at this Time with as great Security and Advantage, of which before.

As to the Manner or Way, whether *derivative*, *i. e.* drawing more towards the Parts affected; or *revulſive*, *i. e.* calling off the ſame by one directly contrary, or oppoſite: the Nature of the Complaint, and the Part grieved thereby, will beſt demonſtrate; about which, alſo, I would adviſe you ſhould look over our Author's ſecond Commentary, already refer'd to.

The *French*, and ſome other Foreigners, in almoſt all the *cephalic* Diſorders, practiſe this *Revulſion*, by opening the Veins of the Feet, which is rare, with us, eſpecially in Men (the more the pity) we rather chooſing the *Derivative* at ſuch Times, as by thoſe of the Neck; or content ourſelves with the general Depletion from the Arm, the Circulation of the Blood rendring theſe Diſputes about the Election of the Vein perhaps leſs momentous.

The ſecond Evacuation taken Notice of by *Hippocrates*, as the *Criſis* of Fevers, is that of *Sweat*; but then you muſt obſerve they were thoſe of Nature's own raiſing; and whether theſe put a final Concluſion to the Diſeaſe, or appear'd only at its going off, is not obſerved; yet whether ſo or not, 'tis plain, according to our learned *Commentator*, that in the *Greek Hippocrates* there is no Mention of any *Sudorific* Medicine, and in the *Latin* one, falſly aſcribed to him, only once.

With great Vehemency, therefore, does this Gentleman, in his ninth *Comment.* exclaim againſt them, as fit only for *Quacks* and *Chymiſts* to make their boaſt of, together with the practiſing Gentlewomen in the Country, or the underſtanding Nurſes here in Town: And altho' I cannot come entirely into the Opinion of this worthy Man, as to ſome Particulars about this Matter; yet I want no Arguments to perſuade me, that the common Method of forcing out Sweats, by their boaſted *Diaphoreticks* or fiery *Alexipharmics*, in the Beginning of Fevers, putting the Patient, as it were, into a hot Preſs, under an unuſual Weight of Bed-cloaths, has been

been highly deſtructive; and I cannot chooſe but admire that any one related to the Profeſſion, ſhould give into this pernicious Cuſtom, which tho' not in ſo great Degree, ſince the Time of *Sydenham*, yet ſtill (as the ſame Perſon obſerves) too much prevails among us: For if the *Cocta non cruda*, mention'd by *Hippocrates*, are the Humours only fitted for Diſcharge, how can we think that Nature, who is tenderly to be led on, and not driven by any Means, can at the firſt Diſpute with her Enemy, have made room for his Expulſion? Or what is this but taking the Work by Force out of her Hand, and (putting her by the Way ſhe was taking to ſave) to deſtroy the Sick?

Do we not generally find that all theſe haſty Sweats are *ſymptomatical*, ſeldom leſſening the *Fomes* of the Diſeaſe, but encreaſing the ſame? Or what do we hereby, but quicken the Motion and Heat of the Blood, driving it with greater Force to the Head, and exciting either *Coma*, *Vigil*, or *Delirium*?

Let me therefore importune you, in the Beginning of any Fever, not to meddle with

any

any other *Sudorific* than a Draught of warm Sack-Whey, or ſuch like diluting Liquor, nor to ſuffer more Cloaths upon the Patient than he has been accuſtom'd to; neither yet to adminiſter (which for Form ſake, or to make the Patient eaſy, muſt be comply'd with) any Medicine unleſs the foreſaid *Pulv. e Chel. Canc. c.* the *Conſ. Lujulæ* and the *Sal. Nitri*, eſpecially in a *ſanguineous* or *inflammatory* Fever, under the Notion of *Alexipharmics*, or *Sudorifics* either, and then wait for *Nature's*, or the *critical Sweats*, which breaking out about the Time of the Urine's Separation, may bring good Tidings with them.

It muſt be yet granted, to find the Patient with an agreeable Damp, or a moderate Breathing, through the whole Courſe of a Fever, is more eligible than the dry Skin, with great Heat and Burning, unleſs under a *Paroxyſm* of an *Intermittent*, before the Sweat breaks out; ſince it is very manifeſt that nothing can go well, even at theſe Times, with ſuch a Temper: So that notwithſtanding I am as much an Enemy to the hot and fiery *Alexipharmics*, or the *Diaphoretics*, ſo called,

as

as the Doctor can be; yet I muſt differ from him in this, of thinking it ſo rare for Fevers to be determin'd by *Sweats* only; being perſuaded in myſelf, that the greater Part by far have had no other perceptible *Criſis*, than that of the *ſenſible Perſpiration*, or that the ſame is more certain than all other Evacuations, whether by *Bleeding*, *Vomit*, *Abſceſs*, *Spitting*, *Stools*, or *Urine*, here mentioned by *Hippocrates*, put together in the Computation: Nor can I find the Doctor himſelf, after all he has ſaid, ſo rigorous, as utterly to reject the more mild and temperate Remedies, now in requeſt with us, under ſuch Denomination, as you may perceive by his own Words.

Nollem hæc quæ hactenus dicta ſunt, ita accepi, quaſi nulla in Febribus curandis Remedia, quæ Sudores eliciant ſuaderem: Etenim quæ mediæ materiæ ſunt, & temperata habentur, multo cum Emolumento adhiberi & poſſe & debere, haud inficiar. Iſta de quibus ante dictum eſt (nimirum Rad. Serpentar. Sal. C. C. & ſimilia) cum utrinque a Mediocritate nimium

2 *abſint,*

abſint, tanquam plane perniciosa, ex Medentis ſupellectile, penitus rejicienda ſunt *.

And what can be more natural to conceive, than that a Diſeaſe, which has evidently proceeded from a Stoppage of the Pores, ſhould, when *Nature* herſelf has prepared the Humours in order thereunto, be carried off by the ſame Paſſages, or ſetting thoſe Pores open again, eſpecially if the Work can be accompliſh'd by Means which do not diſturb or overheat the Blood, and is attempted at ſuch Times and in ſuch Caſes as ſhe herſelf does indicate?

I know well that our famous *Sydenham*, is frequently exclaiming againſt this Method, "aſſuring us from his own conſtant Experi-"ence, that moſt Fevers are more certainly "cur'd by *Bleeding* and *Purging*, *(meaning* "*Lenients)* or *Glyſters* alternate, for ſome Days, "than by *Diaphoreticks*; and that nothing ſo "powerfully cools the Blood and keeps the "Fever out of the Head, eſpecially if the "Patient be kept up a-days, as this Method. "Whereas on the contrary, that which is

* Vid. Comment. 3.

" buſied in eliminating the febrile Matter
" through the Pores of the Skin, as it is leſs
" certain, ſo it is more troubleſome and tedi-
" ous, and if it chance the Sick to eſcape
" Death, yet he muſt be puniſhed with a
" load of Remedies, to take off thoſe Symp-
" toms which the ſame have brought on,
" whilſt the Cure is endeavour'd by the hot-
" teſt Remedies, which according to the
" *Genius* thereof, requir'd the cooleſt. For
" tho' Sweating, to ſpeak properly, is Nature's
" own Way, by which ſhe caſts out the fe-
" brile Matter, and is more natural and com-
" modious than the reſt, when ſhe is left
" to herſelf, by firſt digeſting the offending
" Matter, and being rightly concocted, gent-
" ly expelling it through the Habit of the
" Body: Which happy Event, when *practi-*
" *cal* Phyſicians had obſerv'd, the *dogmatical*
" took hence the occaſion, to draw Inferences,
" that all Fevers muſt be ſet upon the ſame
" Way, and by no other. Yet ſhould we
" grant this, how much ſoever *Art* would
" ſeem to imitate *Nature*, it cannot
" arrogate to itſelf this Privilege, of cu-
" ring Fevers certainly in this Way. For

" firſt, *Art* knows not by what Means the " peccant Matter ſhould be fitly prepar'd " to undergo Expulſion: Or if it did, it " has no certain Signs by which to be ad- " moniſh'd of the due Preparation thereof, " and conſequently ignorant of the Times " of provoking this Diſcharge before a due " Concoction; for by forcing the crude Mat- " ter upon the Brain, it adds Oyl to the " Flame. And according to *Hippoc. Cocta, non cruda, ſunt expellenda.* Farther ſaith He

" This is moreover to be obſerv'd, that as " thoſe Sweats which come at the beginning " of the Fever, are altogether ſymptomatical, " not critical, ſo thoſe thus early forced " by *Diaphoretics*, conduce as little for the " moſt part to the Cure as the former. " Again, as *Art* is ignorant of this fit Time " to promote Sweats, ſo neither does it know " how long to perſevere in forcing them: " And ſhould they be continu'd beyond the " due Time, by which the Matter, occaſion- " ing the Diſeaſe, is wholly expell'd, a Waſte " of thoſe humid Particles, by which the " Blood ſhould be diluted and attemperated,

" will make the Fever continue longer, and
" farther heighten the ſame.

" It is evident therefore, how uncertain
" this Method is, whereas on the contrary,
" it is in the Phyſician's Power to moderate
" the other Way, as he pleaſes, in which
" the febrile Matter is ſent forth firſt by
" Bleeding, and then by Purging: beſides
" this Method is preferable, for that if the
" Phyſician ſhould miſtake his Aim, yet he
" will not hurt the Patient, which is other-
" wiſe in the uſe of *Sweating* Medicines:
" For the Heat of one who is kept continu-
" ally in Bed, contrary to his Cuſtom, to
" ſay nothing of Cordials, which are always
" uſed in this way of Cure, confound the
" Oeconomy of Nature, and bring on Con-
" vulſions, by which ſhe is oppreſt, and
" which are now imputed to I know not
" what ſort of *Malignity*: Which Inven-
" tion, either as to the Nature or Notion
" of it, has been much more deſtructive to
" Mankind than even that of Gunpowder:
" Foraſmuch as theſe Fevers are chiefly ſaid
" to be *malignant*, in which the Inflamma-
" tion is higher than in others, and for that

" Reaſon,

" Reaſon, Phyſicians have betook themſelves " to Cordials and Alexipharmicks, to the " end they may expell through the Pores of " the Skin, the Poiſon they dream of. Up- " on which account they have preſcribed the " hotteſt Remedies and *Regimen*, for thoſe " Diſeaſes which required, above all others, " the cooleſt of both: As is evident both in " the *Small-Pox*, one of the hotteſt Diſeaſes " in *Nature*, and in the Cure of other *Fe-* " *vers*; into which Error they were led by " ſeeing the *Petechiæ* and purple Spots, " with other Appearances of the ſame Kind, " all which owe their Riſe, in moſt Sub- " jects, to an Inflammation ſuperinduced up- " on the Blood of the Sick, too much " fir'd by the Fever: Forafmuch as they " rarely happen except at the beginning of " the Plague, and theſe *Flux Small-Pox* " that partake of the higheſt Inflammation.

I have here given you a Tranſlation at large, that you may better judge of the Strength of his Argument. The Difference between us, lies ſurely in the want of diſtinguiſhing the *Inflammatory* or *Sanguineous*, from what I call the *Nervous Fever*. This Au-

thor you will find is every where declaiming against a hot *Regimen*, and keeping the Sick from Bed a-days, leſt the Heat of the Cloaths, and the decumbent Poſture of the Body, ſhould impell the Blood too haſtily to the Head, and occaſion Phrenſy or Delirium, as well as to prevent intempeſtive *Sweats*. In all which he is ſurely right, ſo far as regards the former of theſe, ſuch as the *Angina*, *Pleuriſy*, *Peripneumony*, the *varolous* or *flux'd Small-Pox*, as alſo the *Meaſles*: But in thoſe *Eruptives* I call *Mali Moris*, ſuch as the *Raſhy*, the *Rubeolæ*, and that of which we are now ſpeaking, the *Miliary*, this Method will not hold: Which induces me to think theſe Species rarely happen'd, or were leſs *Epidemical* at the Time he wrote, otherwiſe his juſt way of Reaſoning as well as Obſervation, would have convinc'd him, that neither of theſe would ſuffer theſe repeated Evacuations of Bleeding and Purging, much leſs could the Patient, without the utmoſt Hazard of theſe Eruptions falling back, be kept out of his Bed, which is not the Reſult of a hot *Regimen* but rather of ſome *malign* and poiſonous Matter implicated with the *Blood* and

nervous Juice, which *Nature* has no other way of ſeparating, than by throwing forth the ſame to the Confines of the Body: And wherein we know of no better way of aſſiſting her than by temperate *Cordial Remedies*, together with *Veſicatories* and the kindly warmth of the Bed; for whatever our Author has advanc'd againſt the Notion of *Malignity*, we are fully ſatisfied that the *Fomes* of theſe Fevers is of a more ſubtle or ſpirituous Nature, and of a diverſe *Indoles* from the reſt: And calls for a different *Regimen* alſo, and that from the Symptoms attending, the Oppreſſion on the *Præcordia*, the *Languor*, the weak, low and ſtaggering Pulſe, the *Tremor* and other train of *nervous* Symptoms, which are not the Effects of *Regimen* either hot or cold, but proper *Diagnoſticks*, I might ſay *pathognomonick* Signs: that theſe I ſay therefore are not improperly ſtil'd *Malignant*, and how great a Prejudice ſoever he had taken up againſt the uſual *Alexipharmicks* preſcrib'd at that time, he is yet ſo candid, as to own ſometimes great Miſchief might happen by the oppoſite Method, giving riſe to the ſame Epithet. 'For there is nothing (ſaith he) more

'frequent with unexperienc'd Phyſicians,
'than to blame *Malignity* when with *Cold*
'*Medicines*, and the prepoſterous uſe of
'*Glyſters*, they have ſo looſen'd the *Craſis*
'of the Blood, and ſo weaken'd Nature in
'performing the Deſpumation thereof, that
'Faintings and other Symptoms (which are
'really the natural Effects of ſuch Hinder-
'ances) fall out.' Which different Opinions of the ſame Gentleman we cannot well reconcile, unleſs by ſuppoſing the firſt, the *Hot Regimen*, is meant of the *Inflammatory*, this laſt, the Cold of theſe *nervous Fevers*. As to the Cunning or Knowledge of *Art*, in the one more than the other, it ſtands ſure upon the ſame Level. For *Art* knows as little whether the febrile Matter, one part, is of that Nature as to be let out by the Lancet, whilſt the other muſt be diſcharg'd by Stools, thus alternately repeated; much leſs are we ſure that in this Method, if we do no Good, we can do no Harm, ſo that we muſt leave both to the Umpire of Experience, as he acknowledgeth. Thus if I find in the inflammatory Fever, by keeping my Patient out of Bed for ſome time in the Day,

by

by drawing off Blood, for two or three times at proper Diſtance, and throwing up of *Glyſters* on the Days between, together with the cooling Diluters, the offending Matter is drawn off, and the Heat extinguiſh'd: But if on the other Hand in the *Nervous*, either the raſhy or milliary, if I bleed, altho' but once, much more if I go to purge him, when Nature is intending the Expulſion of the malign Particles to the Skin, and ſtill more eſpecially if I take him out of Bed, and expoſe his Body to the Air, at this critical Juncture: If by this proceeding, I ſay, together with a Cold, in the room of a Cordial, at leaſt temperate *Regimen*, I find the Eruptions retroceding, and the Sick daily ſinking till the deadly Symptoms approach: This Experience, I ſay, muſt guide me in oppoſition to all *Theories* and *Hypotheſes*, when the one and the other Method of proceeding is to take place: Nor muſt I forget to acquaint you what the ſame Author obſerves in his *Recapitulation*, in the Words following concerning the febrile Criſis by the ſenſible Perſpiration.

" And

"And thus in the Space of fifteen Years, "wherein the foregoing Obſervations were "made, there appear'd five ſorts of Con- "ſtitutions: Some certain and peculiar Diſ- "poſition in the Air, producing ſo many "ſeveral *Species* of *Epidemicks*, *viz.* Fevers, "the firſt of which reigning in thoſe Years, "wherein Autumnal Agues were moſt fre- "quent, ſeem'd the only regular in diſpoſing "the febrile Matter, prepar'd by due Con- "coction, to go off at a certain Time, ei- "ther by a ſufficient Sweat or large Tranſpi- "ration; And which therefore I call the "*depuratory Fever*, which I reckon indeed "to be the chief and primary Fever of *Na- "ture*, both as to the regular Method ſhe "uſed in preparing the morbifick Matter, "and in digeſting the ſame at an appointed "Time; And alſo becauſe this more fre- "quently occur'd than other Fevers. And "it is probable that *intermitting Fevers* "raged *epidamically* in former Days, much "oftener than other Diſeaſes, if we conſider "the many and large Tracts publiſh'd by "the old Writers concerning them: Tho' "they have appear'd leſs frequently ſince the

"laſt

"laſt great Sickneſs in *London*, and indeed "that *peſtilential Fever* was the forerunner "of all thoſe Inflammatory ones which came "afterwards. Again, (ſaith he) unleſs I am "deceiv'd, all thoſe excellent and neceſſary "*Axioms* which *Hippocrates* and the *Antients* "have deliver'd, muſt have been adapted to "this *primary Fever* abovemention'd, where- "by it is ſo to be govern'd that the febrile "Matter may be prepar'd to make a true "Criſis by Sweat. For I do not rightly un- "derſtand how thoſe *Apheriſms* can be ac- "commodated to thoſe ſubſequent Sorts that "have a different Nature, and are ſeldom "cur'd by that Method.

And this ſhall ſuffice if I thought it not more than ſufficient, to prove that albeit there are ſome which are beſt remov'd by *Bleeding* and *Glyſtering*, thus alternately repeated, yet the *primary* and *original Fever* was always judg'd by Sweats.

The third of the Evacuations obſerv'd, as determining Fevers, among the Patients of *Hippocrates*, was that by *Vomiting*; yet this I think is ſeldom the Caſe with us, in Compariſon of the foregoing by *Sweat*; for as that

which

which falls out in the Beginning thereof, very rarely concludes the Diſtemper, ſo what after enſues of this Kind, through the other Stages, is for the moſt Part a *Symptom* only.

'Tis true, it may ſo happen, as after a Debauch or ſome noxious Drug taken into the Stomach, Nature ſets about her own Deliverance, by inſtantly returning or throwing out what gave her the Uneaſineſs, whereby the Poiſon getting no farther, or not being admitted into the Blood, a Fever may be prevented: And this Advantage we have certainly gain'd hereby, that as ſhe from the *Nauſea* and Retching, gives the firſt Hint, ſo there is ſcarce any, where we may not with Safety purſue her Steps; and as I have already acquainted you, begin the Cure by giving a Vomit, than which the *Commentator* himſelf does acknowledge there is no Remedy more wholeſome, or ſo effectual to take off the Head-ach or Sickneſs, uſually accompanying, whereby alſo not only the firſt Paſſages are empty'd, the crude Matter therein abounding reſtrained from paſſing farther, but by the Force of the Shock from the Muſcles concern'd in the Operation *(which according*

to

*to mathematical Calculation * is equal to 260 thouſand Pound weight, neither a Grain over or under)* all the Bowels within reach of the ſame (and ſurely none will need to be left out) being drawn into Conſent, are enabled to free themſelves from any obſtructing Matter, ſticking to their Sides, or ſtopping up their finer Paſſages; beſides which, ſome Particles of the Medicine, together with the diluting Liquors poured down, after inſinuating into the remoter Veſſels, and mixing with the Blood, the Humours heaped up therein, are fitted to be thrown out by *Sweat*, uſually ſucceeding the Work of Vomiting †.

As to the fourth way by *Abſceſs* which, as *Sydenham* ſays, is Nature's Inſtrument whereby ſhe frees the Fleſh from any thing offenſive, as by a *Fever* the Blood; the whole Proceſs being her Handwork, where, by ſome critical Tranſlation of the morbid Matter upon certain parts of the Body, ſuch *Abſceſs* is formed, and which, according to thoſe Parts where it is diſcharged, proves either *ſalutary* or *fatal*; this, I ſay, is ſo much

* In the New *Theory* of *Fevers*.

† See Comment. an. of Dr. *Friend* de Feb.

her

her doing, as not to be imitated by Art, who can only assist in hastening *Maturation*, when any Tumour appears that gives Encouragement thereto, which then belongs properly to the Surgeon's Province.

The fifth is by *Spitt*, meaning particularly the Expectoration, so necessary in the Diseases of the Breast, such as the *Peripneumony*, and *vomica Pulmonum*: The *pleuritic Affection*, as we have already noted, is little advantaged by such Remedies, as forward this Discharge, but in a manner wholly depends upon the Lancet; however, as helps to attemperate the Heat, and abate the Inflammation, *nitrous Medicines* with *Emulsions* may be beneficially prescrib'd: As to take off the Tension of the inflamed Membranes, *Sperma Ceti Boles* and *oily Draughts*; but of this before, and for your farther Instruction therein, I would desire you to refer to the v. Comment of this Author.

But besides this Method of Expectoration, in these *pulmonary* Diseases, there is another critical Discharge made by the *Salival Glands*, I mean that in the *flux Small-Pox*, where Nature at the appointed time, endeavours to

throw

throw off ſome part of her Burthen in the Way of *Salivation*, on which the Life of the Sick depends; or which not riſing at all, or ſuddenly declining, the Caſe is for the moſt part fatal.

Dr. *Sydenham* takes Notice, that about the Year 1667, a Fever appear'd which much reſembled this Diſtemper, and ſeemed one therewith, excepting the Eruptions: So that he made no Scruple to name it a *variolous Fever*, only with this difference, that as in the laſt, the morbid Particles were expell'd by the Glandules of the Skin, as well as thoſe of the Tongue and Cheeks, in this, they were put off by theſe laſt only, both having the ſymptomatical *Sweats* at the Beginning: Nature ſeeming to intend no other *Criſis* in this Fever than that by *Salivation*, tho' ſhe was often put by this Courſe, either by a Looſeneſs or *Colliquative Sweats*, which were both *Symptomatical*, and did not judge or cure the Diſeaſe, any more than thoſe at ſome times happening in *Pleuriſies*, *Peripneumonies*, and other *inflammatory Diſtempers*. It is to be obſerv'd, that at this Time the Con-

Conſtitution favour'd more particularly the *Small-Pox* which was then *Epidemical*.

Proceed we now to the ſixth, at leaſt in our Account, which was that by *Stool*, in which there is a large Field to contend, and powerful Combatants to engage.

We have already acquainted you, that in the common *inflammatory Fever*, the Body is to be kept open through the whole Courſe, if not anſwering of itſelf, by the Means of lenient Clyſters or lenitive Draughts, every, or at fartheſt, each other Day, whereby to allay the feveriſh Ebullition of the Blood, and ſecure the Brain from being affected; but in *nervous* and *eruptive Fevers*, as we juſt now obſerv'd, where the Pulſe is depreſt, and the Spirits languid, both theſe muſt be forborn, or leſs frequently enterpriſed, leſt the *Raſh*, or whatever is thrown out into the Skin, falling back, or the Patient weaken'd thereby, Nature ſhould be too much infeebled to caſt off her Burthen, by ſome more ſuitable way of her own chooſing, or which is more agreeable to the Genius of the Fever, which for the moſt part is that by Perſpiration.

We have alſo farther inform'd you, that in all of them, about the time of the Termination thereof, or preſently after, ſo ſoon as his Strength will allow, he is to be purged, by which any remaining Humour, too groſs poſſibly for being carry'd off through the Pores of the Skin, may be ſent out from the *Glandules* of the *Inteſtines.*

But now it ſeems in that particular one of the *Small Pox*, we have ſome Phyſicians of great Learning, ſound Judgment, and equal Probity, who have lately advanc'd a Poſition entirely repugnant to the Opinion of their Predeceſſors, *viz.* that before the time of *Maturation* is compleated, if any Danger ſeems to threaten, we are to begin this Method of *Purging* the Sick, and muſt now lay all the Streſs upon theſe Medicines, repeated daily, or each other Day, as the Circumſtances allow, or the Caſe may require.

I muſt own I have yet ſome Doubts upon my Mind, concerning this new Way, having ſo often been a Witneſs of the fatal *Diarrhœa's* that, about this time, have carried off ſo many of my Patients, in ſpight of all my Endeavours to bridle the ſame:

Inſomuch that, unleſs in the *confluent* ſort in Infants and young Children, when (as *Sydenham* has obſerv'd) theſe Stools are a kind of Subſtitute to the *Ptyaliſm* of the Adult, happening at the beginning of the Diſtemper, I am always fearful of the ſame, ſince in the milder Species thereof, when all Things go as well as we can wiſh, nothing is ſo common as a conſtipated Belly: Nor did we think, till lately, that any of the Afflicted ſuffer'd for want of Stools, tho' it were for 10, 11, or 12 Days ſucceſſively, or till the Suppuration of the Puſtle, and the Scab beginning to dry away; but on the other hand, if before, or even at this time they fell into a Flux or Looſeneſs, we were apprehenſive Things would not go well, as Experience too often had confirm'd to us; and therefore for ſome Years paſt, when at any time about the State of the Diſeaſe, or the Return of the Fever, which is called a *ſecond one*, I found the ſame high, great Thirſt attending, Oppreſſion on the Breaſt, *Delirium*, *&c.* and a Puſtule rather fill'd with a crude wheyiſh Liquor, than *Pus*: When at theſe Times, I ſay, I have ventur'd after bleeding,

to direct a domeſtick Clyſter of Milk and Sugar, to ſoften the hard Excrement in the *Rectum*, in order to relieve the Head, it has ſometimes anſwer'd: At others (ſo fickle and uncertain is the State or Condition of Phyſick, together with that of its Profeſſors) in the Place of one, we have had it may be ten or a dozen Stools thereby; ſo that with much Difficulty the ſame has been reſtrain'd, and the Patient ſaved. What now muſt have been the Iſſue, had a phyſical Clyſter (if no other than the common emollient Decoction, of which the Relations were not apprized) been thrown up, but this, that I had ſurely taken wrong Meaſures, or the Apothecary had made ſome Miſtake, by which the Sick was thus in Danger of being deſtroy'd? And truly I have been leſs adventurous this Way, perhaps, than many others, encourag'd by whatever Authorities, having often been a Witneſs of ſuch wonderful Alterations after one Night's time, in the advance of the Puſtule, its filling, and ſudden change from crude to a concocted Matter, with a return alſo of the Spitting or Expectoration, which had ceas'd the Day be-

fore; and when, if I had adventur'd upon a ſimple *Clyſter*, inſtead of *Bliſtering*, which I now prefer, or that more Stools than I expected ſhould have followed; I had in all likelihood put Nature out of her way, and hinder'd the Buſineſs of farther ripening this immature Production, which ſhe was bringing about.

But theſe Gentlemen tell us, they do not ſet upon their Purging, till ſhe has done all ſhe can upon the Outworks of the Skin; or that the Puſtule now growing black and cruſty, inſtead of filling more, is incapable of receiving any Humour from the Sinus of the Blood; and that in vain do we expect ripe Fruit from the wither'd and dry Branches: That therefore the Diſeaſed has no other Chance for an Eſcape, than by ſtimulating the inteſtinal Fibres, to help ſecerning of thoſe putrid Humours, which the *cutaneous Glands* are now unable to effect.

This, I muſt own, carries a *Rationale* along with it, and has ſeemingly much Weight therein; but when they ſay we run no hazard by the *purging Method*, of the ſwelling of the Hands ſubſiding, after that on the Face

begins to *fall*, or the Puſtules thereon, before their ſtate of Arifaction; neither yet that the Salivation will be thereby impeded, they will give me leave to heſitate a little, till I have made a ſufficient number of Experiments, to confirm me in this Belief, or till I can reconcile that driving from the Center to the Circumference, and from the Circumference to the Center, are much the ſame; or laſtly, that I am ſatisfied we may be able to eliminate by theſe Stools, thoſe very individual morbid Particles, which Nature had intended, and endeavoured, altho' in vain, to caſt out by the Skin.

In other *eruptive Fevers*, I am ſure this is a moſt dangerous Practice; ſince nothing is more common than for one or two looſe Stools, at theſe Times, to overſet the Patient.

And thus, dear Sir, you have the ſum of my Thoughts upon this very ſlippery Subject, who cannot think a few remarkable Recoveries under the *purging Regimen*, brought to countenance the Practice thereof, ſhould avail, while we ſee as many People die of the Diſeaſe with a Looſeneſs upon them (and

which alone deſtroys them) as can be truly ſaid to eſcape thereby.

You know what our Friend *Wagſtaff* has ſaid of this Diſeaſe, that there are ſome whom the *Phyſician* cannot cure, and others, that the *Nurſe* can't kill; I wiſh with all my Heart, that by many more dying than doing well under this haſty Purgation, we give not occaſion to have the Phraſe inverted: I am ſure I would not have you enterprize it, but in Conſultation with ſome, whoſe Character may be ſufficient to ſecure you from Obloquy, in caſe of a Miſcarriage: Neither then, till you are convinc'd in your own Mind, that there is room for no other way, by which your Patient may eſcape, and then let his Friends determine among themſelves, whether this *Anceps Remedium* is not *melius quam nullum*: Nor would I be thought ſo great an Oppoſer of *Purging* (any more than *Bleeding* at theſe Times, when the Fever is extreme, the Breaſt ſtraiten'd by the Inflammation, and the Patient under Difficulty of Reſpiration from the ſame) as to deny a laxative Medicine, that might juſt empty the Bowels when over coſtive: To which

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purpoſe, I uſually preſcribe an Ounce of *Manna* to be diſſolved in a quart of pectoral Decoction, a warm Draught of which may be taken at two or three Hours diſtance, till the Intention is anſwer'd, without letting my Patient or his Friends know any thing of the Matter; and by going farther than this, or an ounce of the *Elect. Lenit.* in two or three of *Aq. Lact.* I muſt own I am not fully ſatisfy'd, whether I may not do more harm than good: As to the directing of *diagredi-ate* Medicines (which our Author inſinuates may be ſafely adminiſter'd) at a time of ſo great a *Phlogoſis* in the Blood, manifeſt by the dry Tongue and ſcorching Heat, I can only ſay, *præſcribat qui vult, haud ego*; and theſe Fears of ſome ill Conſequence attending ſuch Proceeding, as I have already inform'd you, are founded upon my Obſervation how ſmall a number of Patients are reſtor'd, when ſeized about this time with *Diarrhœa's*, *Symptomatical* ſurely rather than *Critical*: Or if the laſt, a fatal *Criſis*, in Compariſon of thoſe who are deſtroy'd thereby *.

* See more on the ſame Subject in Dr. *Freind's* 12 Commentary, as alſo in his Epiſtle to Dr. *Mead*, *De purgantibus in* 2 *variolarum Febre.*

I had it once in my Mind, to have given you a more diſtinct Account of this Diſtemper, under its ſeveral Diviſions and proper Stages; but conſidering it might draw me into Controverſy, I choſe at this time to avoid, and turn my Thoughts upon Fevers in general, which I only intended, and you deſired, into a Diſcourſe of one particular; a Taſk for which I own myſelf unfit, beſides enlarging the Bounds I had ſet myſelf, I laid aſide (at leaſt for the preſent) any farther Intention thereof; but yet I cannot forbear taking Notice that the Species of this Diſeaſe ſeems of late to be unneceſſarily multiply'd: For we are now vaſtly encreaſed beyond *Sydenham*'s Diviſion of *Diſtinct*, *Coherent*, and *Confluent*, into *Cryſtallinæ*, *Verrucales*, *Siliquoſæ*, from their ſeveral Reſemblances. Alſo *veſiculæ flatulentæ*, & *aquoſæ*, compared to little Bladders, filled either with Wind or Water; or as Dr. *Freind* has denominated others of them, *Papulæ ſive Pelliculæ rotundæ*, *Concavæ*, *Vacuæ*, *Molles*, *Veſicarum aut Folliculorum ſimiles* *.

* Of which in his Epiſtle to the ſame Gentleman, *De quibuſdam Variolarum generibus.*

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The learned *Frenchman Helvetius*, in his *Eſſay* lately publiſh'd on the *animal Oeconomy*, reckons up alſo four Sorts of a *malign Small Pox*; one belonging to the *Diſtinct*, the other three to the *Confluent*; and differenceth them accordingly, as *malign Diſtinct*, and *malign Confluent*; between theſe comes the middle Species or *Coherent*, which doubtleſs may border alſo on both Kinds, that is *Benign* or *Malign*; but whether each, as this worthy and judicious Man has decypher'd them, is always attended with the ſame Specifick or peculiar *Characteriſticks*, by which indubitably we may diſcover them from all others, or be apprized of their fatal Tendency, merely from their Aſpect, before ſome threatning Symptom appears, may perhaps be queſtionable: Or how far theſe Particularities may be of real Uſe, I do not ſay to the *Hiſtorian*, but the *practical Phyſician*, I ſhall leave others to determine; whilſt with Reſpect to my own Opinion, I think them for the moſt part little otherwiſe different, than according to their greater or leſſer Tendency, from a ſtate of *Crudity*, to a more or leſs perfect one of *Digeſtion* or *Concoction*;

or

or as they happen to prove of a more *benign* or *malign* Quality or Diſpoſition, requiring ſuitable *Regimen*, *i. e.* ſuch as ſhall be thought moſt proper for aiding or aſſiſting Nature, in diſpoſing them to that Maturity they ſhould, or ought to acquire.

And thus, if ſhe by any *Lapſus* or *Aberration* throws out ſome *anomalous* Eruption, bordering however upon this Diſeaſe; or from which we in ſomewiſe fathom her Deſign, what is it that the Phyſician can do more than help her (at leaſt all he can) in bringing theſe irregular Productions to that Perfection, of which they are in their own Nature capable, to encounter the Symptoms, and ſupport her under the *Conflict*, till ſhe has got the Maſtery, or is vanquiſh'd by the Enemy? What is it, I ſay, that the Variety or different Reſemblances of theſe Puſtules, which can ſcarce conſtitute a new Species, any more than a Monſter with a human Face, a new Set of Men; or admitting them more frequent than they are, What is it, give me leave once more to enquire, that Art can do more than ſedulouſly to attend the Symptoms, with the

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various Appearances, and providing againſt the ſame, to bend the chief Scope to the vital Indication; making the Pulſe the general *Criterion* for the *phyſical Regimen*, whether *cold*, *temperate*, or *hot*?

Whoever (I am perſuaded) ſhould follow that of our laſt mention'd Author, I mean *Helvetius*, through the ſeveral *ſtadia* of this Diſtemper, his Bleeding repeated two or three times a Day, both in the Arm and Foot, at firſt ſetting out; his Vomiting with the *Sal Stibii*, and purging three or four Hours after, with his daily clyſtering at ſome times, through the whole Courſe thereof; or laſtly his *Beef Soups* inſtead of *Chicken Broth*, which was deny'd by Dr. *Sydenham*, *quantumlibet tenue*, at the Cloſe, would be hardly, I mean ſeverely cenſur'd among us, who ſeldom or never run theſe lengths, for fear of interpoſing in Nature's Work at the beginning, hindering her in her *Apparatus*, or at that of Separation, much leſs at the Cloſe, where ſhe is about the perfecting, or bringing to Maturity what ſhe has caſt forth; but ſince you have an Opportunity at all times to ſcan this Method, and conſult the ſeveral

Caſes,

Caſes, in which the ſame is ſet down for our Imitation in the Treatiſe aforeſaid, I ſhall leave it with this Remark, that as the beſt Head-Pieces for *Theory* or *Speculation*, have not been always Maſters of the beſt and ſafeſt Practice, ſo I would not have you forſake our Countryman *Sydenham* yet a while, as a Guide in the *Small Pox*, till you are ſatisfy'd from your own Obſervation and Experience, (which from my own, I muſt ſay I am not) that ſome later Diſcoveries, and new Methods, will be more to the Advantage of the poor Patient, who truſts you with his Life; and for which, if negligently or inadvertently loſt, you are to be accountable. It is ſaid by ſome who knew him, that Dr. *Sydenham* abated of his Rigour in the *cold Regimen* before he dy'd: And it will be ſurely ſafeſt for you to prefer the mean, as I have hinted to you at the beginning of this, or the more temperate: It was excuſable in this honeſt Practitioner, who ſeeing the People round about him, at a time when the Diſeaſe was *Epidemical*, and very raging, ſcorch'd to death with *Mithridate*, *Venice Treacle*, or *Treacle Water*, with the *Syrup of*

Saffron, (which was the Practice of his Contemporaries) and then ſwelter'd up with double Quilts, Rugs and Blankets, with cloſe Curtains, and a great Fire in the Chamber, by which the *Maculæ nigræ* and *Petechiæ*, the *bloody Urine*, and other dreadful Symptoms, ſuch as *Delirium*, *Coma*, *Subſultus*, &c. might be haſten'd; that he, I ſay, obſerving the Miſchief of theſe *Alexipharmics*, and hot Method in general, was running upon the Reverſe, not out of the *Frying Pan* into the *Fire*, but from this laſt as it were into the *Water*.

And here, before I quit this Subject, give me leave to correct another Miſtake ſurely, of this admirable Man, who ſays *, that he had neither ſeen, nor heard of any one's miſcarrying in this Diſeaſe, becauſe the Small Pox came not out at firſt; but that too many dy'd in whom the Diſeaſe appear'd well, but after ſtruck in again, the Puſtles at leaſt ſinking or falling, before they were ripe: In anſwer to which I could give ſome Inſtances, where I had ſufficient Aſſurance, not only by

* Sect. 3. Chap. ii.

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preceding Symptoms, but the actual Appearance of a few ſcatter'd, but faint or pale Eruptions, that the Diſeaſe was *variolous*; and if Nature had been ſtrong enough to have thrown out the ſame, there would have been a true Small Pox: The Pulſe I obſerv'd was low and flagging, the parts of the Body cold, for want of a Fever, rather than the too great Effervescence of the Blood; the Sick complaining of Faintneſs, and the Puſtules (of which in one, I obſerv'd more than an Hundred, in different parts of the Body, in the other ſcarce Twenty) about the ſixth Day, ſuddenly diſappearing, they died under a *Deliquium* with light Convulſions.

Theſe certainly, if any among the Diſtinct, may be truly named *Malignant*, or of evil Diſpoſition; and wherein a *warm Regimen*, with plentiful *Bliſtering*, but no other Evacuation, is not only juſtifiable, but abſolutely neceſſary, as the more temperate and cooling in the other Species.

I come now to the ſeventh and laſt way of Evacuation, taken Notice of by *Hippocrates*, as a critical Solution of Fevers, *viz.* that by *Urine*, ſeldom, at leaſt more rarely, hap-

happening with us: However by its ſeveral Contents and Appearances, furniſhing us with Signs, as well *Diagnoſtic*, in regard to ſome Diſeaſes of the urinary Parts (of which more preſently) as *Prognoſtic*, in ſome particular Fevers; wherein, little Streſs ſurely can be laid on thoſe Remedies we call *Diuretick*; So that ſhortning my Remarks upon the ſame, I will ſum them up with this of our judicious Commentator, thereunto relating *.

Neque tamen ideo quod Urinam moveant, Potiones hæ (viz. *diureticæ*) *inter Evacuantia protinus reponendæ ſunt: Quippe non tam vi aliqua diuretica hoc faciunt, quam quia diluti ſſimæ ſint, uberrimeque ingeſtæ: ita quamvis effuſiſſimè proruperit Urina, fieri poteſt, ut nullo modo exhauriantur vaſa, in quibus eadem humorum menſura, Curſu perenni circumfluit: Igitur contenti ſimus bono eo quo præſtant hæ potiones, quod diluent, ſcilicet, evacuandi Virtutem, quam negavit Natura, iis ne quæramus affingere.*

I have now gone through the ſeveral *critical* Diſcharges, by which Nature has been at

* Comment. the VIAS. de Feb.

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ſome times obſerved to throw off the febrile Matter, as taken Notice of in antient Times by *Hippocrates* himſelf; beſides which, tho' not in the way of Imitation, having no Precedent from her Proceedings, Art has found out one of a more extenſive Quality, and now (whether juſtly or not) practis'd in Fevers of all Kinds: I mean the *Bliſter*, of which the ſame Commentator has hinted to us, that although many of them give way to Evacuation only without other Remedies, yet ſcarce any, where the Diſeaſe rages with Vehemence, unleſs by the help thereof, notwithſtanding as a *topical* one unheeded by that great Maſter of *phyſical* Obſervation *Hippocrates*: However mention'd on ſome Occaſions in his Writings, as an *internal* Medicine.

In reſpect to their Uſe externally, or by the way of Bliſtering in Fevers, ſo far as is reconcileable to their *ſtimulating* Property, or in Caſes where ſuch *Stimuli* are requir'd, we have the Suffrage of almoſt all Parties; and ſeem here indeed to have the Voice of Nature; for what ſo fit to raiſe the drooping Spirits, and by lending as it were a Spur to

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the Solids, enable them to drive on the ſluggiſh Fluids, almoſt ready to ſtagnate in their Veſſels, or giving new Life to the benum'd Parts, that they may continue the Circulation of the ſame? What indeed can rouſe the *Lethargick*, the *Apoplectick*, the *Epileptick*, or recover Senſe and Motion, loſt in a manner to the Paralytic, like unto theſe, apply'd to the ſeveral Parts? What in the *nervous* Fevers, or *Eruptives*, with Stupidity of the Brain, Oppreſſion at the Heart, a labouring or languid Pulſe, *Deliquium* or Fainting, Chillineſs of the Limbs, or of the whole Body, inſtead of burning Heat? Who, I ſay, at theſe Times can be ſo obſtinately ſtupid themſelves, as to withhold this noble, this principal Relief?

In a word, as *Laxity* of the *Solids*, and *Lentour* in the *Fluids*, a natural Conſequence thereof, are the general Motives to the Uſe of *Stimuli*: So where either of theſe are preſent, we ſhould not queſtion their Utility; eſpecially in cold Habits, ſuch as the *Leucophlegmatic* or *Pituitous*.

And hitherto we have taken Notice of them, on Account only of their *ſtimulating*

Qualities, by which, as *Baglivi* in his Practice has obſerved, the lax Fibre is braced up; and thereby more capable to puſh on the ſluggiſh Juices, as but now remark'd; which is founded upon the general Principle of the *Strictum* & *Laxum* of the *animal Fibre*, either *muſcular*, *membranous*, or *nervous*; without any regard to the Diſcharge that is made thereby, which has alſo its Advantages; as in many *rheumatick* Defluxions, ſuch as thoſe particularly about the Throat and Jaws, when bliſtering between the Shoulders, or behind the Ears, deriving the Serofities by theſe Parts, gives manifeſt Eaſe to the Patient: The ſame in *humoural* as well as *nervous Aſthma's*; alſo in *Catarrhs* ariſing from the like ſerous dripping out of the Glandules of the *Larynx*, exciting thoſe irritating and troubleſome Coughs, which being thus diverted by bliſtering the Neck, is taken off; alſo in fixed and ſtubborn Pains, how often, as it were by Charm, do we not perceive the acrid Humours, vellicating the Membranes, thus eliminated or drawn forth?

Theſe, I ſay, are ſome of the Advantages we receive from *Bliſters*, both in the way meerly

merely of a *Stimulus*, and the Discharge of that *ſerous Humour*, gathered under the *Cuticula* where they have been apply'd: As for their Uſe in the *Scall* or *Scab*, the *Impetigo*, *Papulæ*, *Lepra*, *Lichen*, their removing *Stigmata* or Scars, for which they have been apply'd in former, as well as later Days: I can ſay little from my own Experience, to countenance their Application, which, I muſt own, I have been rather ſhy of, from the Miſchief I have known enſue at ſome times, and in ſome of the ſame Caſes here laid down, where Empiricks and old Women have been at work with them.

But theſe, Sir, (if we may credit ſome modern Authors) are an inconſiderable part of the Excellencies of the *Epiſpaſtick*, or the *Cantharides* thus outwardly applied, ſome Parts of which being got into the Blood, as the Doctor particularly notes in his ninth Commentary: And which it is certain they can do, by the Diſturbance given ſo frequently to the Bladder; they are able to impreſs great Alterations in its Maſs, to promote the glandular Secretions, to divide the Texture of the Blood, and divide its Cohesion; by which, Way is made for the Paſ-

'ſage thereof, where before they were heaped 'up, and gave riſe to many ſtubborn Obſtruc-'tions, ſcarce otherwiſe to be removed.

'In theſe Caſes, then, and at ſuch Times, 'tis evident that all the Good we receive from '*Bliſters*, can by no Means be derived to us, 'from the Diſcharge of *Serum*, ſince this might 'be effected otherwiſe; as particularly by *Diu-'retics*, where the ſame in Subſtance with that, 'is let out by the *Bliſter*; neither will like 'Benefit ariſe from any other veſicating Me-'dicine, what Quantity ſoever of the *Serum* 'is drawn away thereby, beſides this of the '*Cantharis*.

Theſe with other Arguments, brought, however, by this learned Phyſician, for this Practice in almoſt every Fever, have not yet been able to convince me, but that in ſome of them, and in ſome Habits of Body, they have their Inconveniencies, as well as Advantages in others; for if by *Stimuli* and Pain, which in ſome Caſes is their prime Intention, they rouſe the torpid Spirits, regain an Elaſticity to the relax'd Fibres, and enable them to quicken the Motion of the Blood, as in the *Comatoſe* Diſeaſes, and others, we

have already obſerved; what muſt we think of them in the contrary State of both, where the Tenſion is already too great in the one, and through the attending *Orgaſm* or inflammatory Diſpoſition of the Blood, the ſame is too rapidly and tumultuouſly driven upon the Veſſels of the Brain, in the other; encreaſing all the Symptoms, as *Delirium, Phrenſy, Vigil*, and Inquietude, at leaſt preventing that Repoſe and Slumber, ſo neceſſary to calm the Outrage of the Spirits, and appeaſe their Diſorder? What muſt we think of them in *meagre Habits*, in *hectic* and *bilious Temperaments*, with *great Heat* and *Thirſt*, *quick and high Pulſe*, dry *Skin*, *perpetual toſſing about of the reſtleſs Patient?* Surely at theſe Times, it will behove us to be more cautious of dilaniating or farther excruciating the miſerable Patient, unleſs we could ſatisfy ourſelves from *Obſervation* and *Experience* (not *ſimple Theory*) that the Good we receive from any Parts of the *Cantharides*, inſinuating themſelves into the Blood and glandulous Liquors, and there, as our Commentator would perſuade us, making ſuch Impreſſion, or ſo altering the febrile Matter, that it may

be with more eaſe carry'd off by Perſpiration or otherwiſe, and the Head, together with the whole nervous Syſtem hereby ſecured from the ſame, inſtead of being farther injur'd; unleſs, I ſay, we could be certain theſe, or any other Advantages would accrue, and recompence the Injury the Patient muſt ſuſtain in the mean Time, by Reaſon of the Pain and *Stimuli*: For though this ſtrenuous Propugnator for their Uſe at all Times, tells us, they have this above the other Evacuations, that they are ſafely enterpriſed at any Time of the Fever, which cannot be as to *Bleeding*, *Sweating* or *Purging*, without the utmoſt Danger, at ſome times of deſtroying the Patient; yet ſurely a very painful Irritation excited, when nothing is ſo much wanted as Reſt and Quiet, cannot be deem'd a harmleſs or inoffenſive Experiment, by which the *Dyſury* on one Hand, with the Smart of the Parts they are apply'd to, on the other, are perpetually interrupting both.

I muſt own there are ſome Conſtitutions ſuffer *Bliſtering* with very little Diſturbance, in Compariſon of others, although entirely free from any *Stupor*, which for the generali-

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ty are the *Lax* and *Phlegmatic*; and if others can bear them well, I ſhould not ſo much object againſt their Uſe, where we can propoſe a real Service from them; but neither can I come into the indiſcriminate Practice, ſo commonly obtaining now among us, from whence, as I have ſeen, I muſt acknowledge, great Benefit ariſing to ſome; ſo alſo, I think, as great Miſchief to others; and notwithſtanding I can allow, that no other *veſicating* or *ſeptical* Medicine, can induce the like Alteration in the Blood, from any Particles thereof, mixing with the Humours, yet muſt I differ herein with our Author, being ſatisfy'd that by their *Stimuli* or irritating Qualities, communicated through the *nervous Syſtem*, by Continuity from the Parts on which they are apply'd, they will in like Manner encreaſe the Tenſion and quicken the Motion of the Blood, as is evident by the Pulſe, which laſts till the veſicated Place is digeſted, the Slough ſeparates, or the Pain goes off: Nor is it known, where much of this has been occaſion'd, either by the ſcalding with hot Water, or burning by actual Fire, that a *Symptomatic Fever* did not enſue; but I ſhall

take leave of this Subject, when I have inform'd you that in the generality of the *nervous* and *eruptive Fevers* belonging to that Claſs, altho' unattended with *Sopor*, or any *comatous* Affection, if the Patient ſeems hurry'd or confus'd, complaining rather of a *gravative* than *acute* or *tenſive* Pain in his Head, there is ſcarce a more ſerviceable Remedy than an *Epiſpaſtic* applied to the *Occiput* (as I have already obſerv'd) and continued there for ſome Days, which in Regard of the blunt Senſe of the Scalp, is alſo leſs painful than upon the muſcular Parts, whether Neck or Arms, and by its conſtant drip, relieves the Brain, when in order to remove the *Dyſury*, very often troubleſome, by Reaſon of the *Stimulus* here longer continued; whence ſome Particles of the Medicine have more Opportunity of being convey'd into the Blood, and exciting that troubleſome Senſation upon the *Sphincter*, you may diſſolve an Ounce of *Gum Arabick* in a Pint of the *Decoct. Hordei*, and adding two or three Spoonfuls of the *Syr. de Althæa*, give a Draught, firſt warm'd, frequently, which I prefer to the common *Emulſions*: But this Complaint you may

may obviate by ordering a ſmall Quantity of *Camphor* to be powder'd with a Drop or two of the *Ol. Amygd.* as about a Scruple or half a Dram, and ſprinkled over each of your *Epiſpaſtic* Plaiſters, when you ſhall ſeldom hear of a *Stranguria* or *Dyſuria* upon theſe Occaſions.

Having finiſh'd theſe Particulars you deſire, it remains for me, firſt, to deliver ſome Directions, as to your Behaviour towards the Sick whom you are call'd upon to viſit; and who, as he can beſt judge of what he feels, you muſt take the Account therefore from him, not ſuffering the over-officious Nurſe, or any other at the Bed-ſide (as is too cuſtomary) to take the Words, as it were, out of his Mouth, or deliver, rather, ſome out of the way from their own: Thus dictating for him, as if they underſtood the State of his Caſe, or what he undergoes, better than himſelf; nay, although a light Delirium happens to accompany the Fever, I practiſe this Method, by which I am enabled to make a Judgment how far this Alienation of Mind extends, whether a ſimple Forgetfulneſs from a preceding Slumber, being juſt then awak'd,

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and in a kind of Conſternation, as may happen at ſome times, or truly *Light-Headed*, as they call it, from a total Subverſion of the Underſtanding.

When you have thus made ſuch Enquiries from your Patient, as may give you the beſt Inſight you can get into the Nature of his Complaint, you may then, but not before (unleſs the Sick can give you none himſelf) get farther Information from the By-ſtanders or Attendants; and after this, ſitting down by his Bed-ſide, take hold of his Wriſt, to examine his Pulſe and the Temper of his Skin, a Matter of greater Moment than is thought by ſome, whether hot, dry, and parching, moiſt with an agreeable Warmth, or a Damp with a Sort of Chill; then looking on his Tongue, at the ſame Time taking an exact Survey of all Parts of the Face, more particularly his Eye, that the next Day you may be better able to judge of the Alteration; from a Series of which, long continued, you will be able to preſage more than at firſt you can imagine; for truly in many of theſe, I have found ſomewhat of the incommunicable, of which nothing but my

own

own Eye and my own Finger could have convey'd the ſame Ideas to my Mind, as theſe have done; and it muſt be ſurely hence, I mean the Countenance, the Temper of the *Skin*, the Way of Breathing, the Mode or Poſture of Decumbiture, with the Geſture, ſome or all, that certain ſedulous and conſtant Attendants upon the Sick, who have made it their Buſineſs to obſerve, have hereby got the Start of many Phyſicians, leſs heedful this Way, in regard to the *Prognoſtic*. Thus as to the *Poſition*, they tell us, they very rarely find a Perſon dying upon his Side, for when he is no longer able to continue that, but turns altogether upon his Back, ſinking down ſtill lower in his Bed, they entertain but little Hopes of his Eſcape; which indeed carries much Reaſon along with it, as arguing great Proſtration of the Spirits, or Inability longer to hold that Poſture, ſo natural in Time of Health, but overpois'd, as it were, by the Weight of the Trunk, eſpecially the Spine, his Body is ſway'd down involuntarily into the ſupine one. The Geſture of the Hands and Fingers in the fumbling with the Sheets, is, you know, an old Remark, and ſure

Token of impending Mortality: But it is time now you retire from the Bed-ſide, and call for the Urine, gathering hence what you can alſo, then for the Pen and Ink, if not provided (as it ought to be) already, by no means hudling over your *Formula*, (too common a Practice) but maturely weighing all Circumſtances that may make either for or againſt the intended Remedy you are propoſing in your Mind.

Conſider, my good Friend, 'tis Life that lies at Stake, a Life, perhaps, on which a diſtreſſed Family, or a numerous and helpleſs Offspring has their Dependence, and which an inadvertent Slip of your Pen may bring to ruin; but if otherwiſe, or that only a ſingle Perſon ſhould be loſt, by Want of that deliberating ſo neceſſary at theſe Times, I cannot think that a Perſon of your Principles, would know how even to forgive himſelf here, were he ſure to be forgiven hereafter; and therefore as leſs neceſſary to the Man I am now writing, I ſhall have done with this Admonition.

Whilſt in your Patient's Chamber, I would adviſe you to carry an even Countenance, leſt

left by the Sternneſs thereof, upon the Feeling of his Pulſe, a Turn or Shake of the Head, at the Sight of the Urinal, much more a diſcouraging Word let fall in his hearing, or a Whiſper to his Friends, he conceives his Caſe to be abſolutely deſperate, or through his Fears makes it truly ſuch; but upon retiring and taking your Leave for that Time, it will be expected you ſhould deliver your Sentiments of his Caſe to them, whether the ſame be dangerous or not, as to the Event; and where there is nothing immediately threatning, you are to give both him and them the Encouragement it will allow, eſpecially the former, that he may ſupport himſelf thereunder, by thinking better thereof; taking eſpecial Care notwithſtanding, that at no Time you make any abſolute *Prognoſtic*, either of *Death* or *Recovery*, nor leave him, unleſs by unhandſome Uſage obliged, under the greateſt ſeeming Danger, as if there was no Poſſibility of a Recovery, which in Fevers is very difficult to warrant, where at ſome Times, by unforeſeen Incidents, when *Art* has been baffled, *Nature* takes the Work into her own Hands, and finds a Way for a

Sort of *Resurrection*, before that at the great Day of *Audit*.

'Tis my Custom to desire the Apothecary, that he would inform me by some Means or other, under these very doubtful and desperate Circumstances, the Day following my last Visit, whether my Patient is yet alive; or if passing by, I see not the Signal of an open Window, I alight, and step up Stairs, persuading his Friends, whilst they can get any thing down, they should attempt it, if it were but a small Spoonful, whereby languishing Nature may be a little recruited, or, if possible, reviv'd: By this Method, and refusing a Fee, I am thankfully receiv'd, and could give you many Instances, where the same has turn'd to account; for if it should happen (and who can say, unless *Omnipotence*, he has the Issues of Life and Death at his Disposal?) that after a long Dispute, she gets the Mastery, I have secur'd my end, viz. the keeping out some officious Person, with their *grand Restoratives*, their *Guttæ Vitæ*, and what not; (for now is the Time they will venture any Thing, being given up by the Doctor) and farther advanc'd my own Repute among them. How-

However, at this Seaſon, I take care that no Remedy be preſcribed unleſs ſome Cordial Mixture, with perhaps ℥ij. *of aq. Lact.* ℥j. *of aq. Theriacalis* ℈ß. *of Syr. Croci and* ʒj. *of Conf. Raleighana*, to be given as I ſaid before, by Spoonfuls; for I think it to little Purpoſe to ſend in more Ammunition when the Fort of Life is upon ſurrendring; beſides to order Medicines at a time when they can't be taken, is baſe and ungenerous, as to ſee a Table crouded with *Boles* and *Juleps*, when a poor Wretch is at the point of departing, is the moſt unſeemly Sight that can be; but to encourage the Proſecution of this Hint I have now given you, and to forewarn you of making abſolute *Prognoſticks:* I could give you twenty Examples of Perſons, deem'd paſt all Hopes, by the moſt eminent of the Faculty of Phyſick, ſurprizingly recover'd, ſome of which have ſet up a Quack or a practiſing old Woman who had got down a few Drops of ſome inſignificant Liquor, or applied a Plaiſter, a *Beef Stake*, *Veal Cutlets*, a *Sheep's Milt*, or a *ſplit Pigeon*, to the Soles of the Feet, and made them famous all their Life time after; but one, which, whilſt I

was

was writing this, has happen'd, I will here impart.

A young Lady who had ſuffer'd many Days under what I call a *nervous Fever*, at about a Month's end from the firſt Seizure, having all the Symptoms of a dying Perſon upon her, as an *imperceptible Pulſe*, *cold Sweats*, *Tremor*, *Aphonia* with *ſtrong Convulſions*, a worthy Man of the College, who had been call'd in upon me, thought it time to take his leave, modeſtly alledging, that the Feeing of two Phyſicians was too much, when neither could do any good, the Patient incapable of receiving any Thing we could direct.

A Day or two after his withdrawing, the Apothecary deſired I would come once more to take a View of the Body, for having done all under her inſenſibly; through the overſight of her Nurſes, ſhe was mortify'd in near twenty Places of her Buttocks, Hips and Thighs, which how unlike ſoever to ſucceed, having ſcarify'd ſome of the deepeſt, I order'd to be well fomented with a Decoction of the hot Plants, and a large Proportion of camphorated Spirits, and that the ſame ſhould

be

be after dreſt with Pledgits dipt in the melted Liniment, *cum tertia parte Spir. Terebinth.* over which an adhæſive Plaiſter that might ſecure them; giving Charge to the Nurſes to be more careful for the future in turning her dry, and ſhifting the Applications which the Apothecary provided, and left ready for them, as they grew wet and fell off.

Thus for two or three Days we continued this Method, the Patient taking nothing in all that time, at leaſt of no Signification, but lay under continual *Leipothumies*, as one dying away, for no ſooner one Fit went off, but another inſtantly came on: Yet notwithſtanding by thus diligently inſpecting the Mortifications daily, and ſometimes twice, the native Heat, which ſeem'd in a Manner extinguiſh'd, by the long continuance of the Fever and impoveriſh'd State of her Blood, by which its Balſam was deſtroy'd, began to rouſe up, the Parts to inflame and ſeparate at the Edges, ſhewing ſome little tendency towards Digeſtion, which encourag'd us ſtill to proceed, till I perceived a laudable Matter upon ſeveral of them: Yet coming about the two or three and thirtieth Day of the

Sickneſs into the Dining Room, I found the Relations in Tears, who told me it was needleſs to go up, for that ſhe was now dead, as they apprehended, who were about laying her out.

I was ſomewhat aſtoniſh'd, I muſt confeſs, that the Hopes I had ſo lately entertain'd, (which yet I had kept to myſelf) of this Eſcape, ſhould be gone thus ſuddenly; but having ſeen her ſeveral Times before under the *Deliquia*, I was not certain it might be now otherwiſe, and even againſt their Wills ran up into the Chamber, where by a gentle Warmth, but much more the creeping Pulſation of the Artery, tho' little or no breathing was perceptible, or motion of the Breaſt, I was certain, tho' we had many Parts cadaverous, the whole was not yet become a *Cadaver*. I held a ſtrong ſmelling Bottle to the Noſtrils, and after ſome Minutes, the Water trickled from her Eyes; in a little time the Fit went off, and ſhe lifted up her Eyelid: I call'd to her aloud, but ſhe ſeem'd not to underſtand any Thing I ſaid; yet I made a ſhift, by opening her Mouth, to get down three Spoonfuls, one after the other, before I

left the Room, of a Mixture with ℈j. *of the Sal. Vol. c. c.* added to that with the *Raleigh's Confection* before mention'd, from which ſhe grew at Night more ſenſible; her fainting return'd much ſeldomer, and was of ſhorter Continuance, inſomuch that after few Days her Heat and Spirits reviv'd, the Sloughs caſt off, and the dead Lady, by a ſuitable Diet, is reſtor'd again, to the Surprize of every one that had ſeen her: Whom, ſhould we have both relinquiſh'd, and ſhe had got through, under the Management (tho' this was very unlikely, conſidering her Condition) of another Set of People, I will leave you to make the Inference.

Sir *David Hamilton*, in his Hiſtory of the *Miliary Fever*, gives us an Account of a Gentlewoman who lay for two Days, cold and ſtiff, without Pulſe, Breathing, or any Sign of Life: Yet recover'd, but not without a Mortification on her Hips, by long lying in Bed upon the ſame.

On the other Side, take the following.

Alkalinus, as I have already, I think, obſerv'd, was ſo remarkable for his Sagacity and Penetration, as to the *medical Preſage*, that

his Sentence of Death was by ſome eſteem'd ſo irretrievable, that no Man could avoid the ſame, when pronounc'd by ſuch an Oracle: And yet I can aſſure you, the firſt time I happen'd into the Company of this *Æſculapian Prognoſticator*, it was in the Preſence of three learned Phyſicians, who had for ſeveral Weeks attended one of my Neighbours, much exhauſted by the continuance of a *ſlow Fever*, that had ſeveral times intermitted, and been as often put by, for ſome Days, with the *Cortex*; ſo that at length it ſeemed to diſappear: But the poor Gentleman growing ſtill weaker, and a *nervous Atrophy* coming on, this famous Man was call'd in, who, after his uſual Way, taking little Notice of the other Gentlemen, only enquiring what had been done, advis'd the Patient to turn them off, for that he had no Occaſion for their Aſſiſtance: Inſtead of which, the Cook was directed to get ready a Chicken for his Dinner, with a Pint of ſuch Wine as was moſt grateful to his Stomach: (For you muſt know he had been a Bottler) two Hours after, he was to get into his Coach and to be drove a Mile or two from the Town's end,

encreaſing daily his Journeys, as he found he could hold out: And thus the Doctor took his leave (having put three Guineas into his own Pocket) with the Salutation of *Do this and live.*

The firſt part of the Experiment being try'd, the Chicken would not go down; the Wine indeed paſſed, but after a little Pauſe, was caſt up again, as almoſt every Thing he took; when at the time appointed, the ſecond was alſo put in Execution, and he was lifted into the Coach by his Aſſiſtants, one of which ſat by him; but by that time he was got to the end of the Stone Pavement, finding himſelf unable for the Taſk, he order'd his Return, where being with much Difficulty taken out, he expir'd before he could be put into his Bed.

This Caſe *Alkalinus* ſurely miſtook, believeing all meerly the Effect of *Inanition*, *Flatulency* or *Hypochondriaciſm*; like what *Sydenham* had formerly obſerved, when being ſent for to a Gentleman ſubject to great Fits of Weeping, and enquiring what had paſt, he underſtood there had been a Fever, which his Phyſician thought was not yet removed, and therefore kept him to a poor Diet, whereby he was brought

under this exceeding Weakneſs, that without any Cauſe, he would fall a crying; of which the judicious and rightly reaſoning Man, taking Notice, and farther examining the Circumſtances of his former way of Living, ſo different from what he was now enjoyn'd, immediately relax'd his Penance, allow'd him white Meats, and a Glaſs of Wine, aſſuring him he had no Fever, nor any thing to fear thence, which was accordingly verify'd, and this involuntary Weeping quickly left him: Whether or no *Alkalinus*, I ſay, took this for the like Affection, I know not, but am ſure, however poſitive of Succeſs from his Advice, he was out in his Prediction.

I have mention'd theſe, as Inſtances, to forewarn you againſt abſolute *Prognoſticks*, as alſo to render you very careful how you give too much Encouragement; for it is always beſt that your Patient and his Friends ſhould be rather ſurprized at his doing well, than at his Deceaſe; eſpecially if taking hold of any thing you had let fall, as to his Safety, it ſhould otherwiſe fall out; but it is time I ſhould return.

When you have thus done your own Duty, it will be neceſſary, by the ſtricteſt Injunctions, to preſs that of the Attendants about the Sick: I mean that they forbid them any ſuch Liberty, as may be hazardous to them either by treſpaſſing in Diet to gratify ſome irregular Appetite; or getting them up, before it may be ſafe for them, under the Pretext of the Bed's *ſoaking them*, a Term among fooliſh and inconſiderate Nurſes, or of making it eaſier for their after Repoſe: And here I may acquaint you, that in theſe Fevers of the nervous Kind, I never ſuffer my Patient to riſe, before the Diſpumation is finiſh'd, the *Criſis* over, and the Fever itſelf at leaſt moderated, if not entirely ſubdued; nor that he exceed his Chicken Water, Sack Whey, Panada, *&c.* Where they are not contra-indicated, as by a *Diarrhœa* (with one Glaſs of Wine in a Day, under Limitations before obſerved, in the nervous Fevers attended with *Deliquium* and Sweats) through the whole Courſe.

For believe me, Sir, as I am ready to think one third of the common People labouring more eſpecially under the Fevers we call ner-

vous, are loſt, by ſtaying up too long: So others run as great hazard of their Lives, either by riſing too ſoon, thinking to run away from the Fever, or keeping up the ſame, if not relapſing thereinto, from obſtinately humouring their Palates with unſuitable Foods or Liquors: And this by the Connivance oftentimes of their Nurſes, who inſtead of refuſing them what is improper, too often lead them into theſe fatal Miſcarriages.

In viſiting poor People, let me perſuade you rather to take no Fees, than undervalue your Profeſſion, by ſtooping to crown Pieces, as ſome I have known, making a ſecond Viſit alſo for the ſame: This will be to leſſen the Dignity thereof, and render you a Hackney Viſitant, by which, though the Miſer may regard you, yet the better Sort will overlook you, meaſuring your Judgment by the Meanneſs of your Condeſcention, or accounting the ſame as ſmall, as the Recompence that will content you: Neither ought you now to preſcribe any chargeable Drug, or purſue the *Pomp* of Medicine; for that would be Injuſtice even to the Apothecary, who inſtead of being paid for *Bezoar*, is perhaps never

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like to be ſatisfy'd for his *Contrayerva*, *Crabs Claws*, with the other *Abſorbents*, or *Alexipharmicks*.

It is, you know, in the Phyſician's Power to do great Service to the Poor, (a glorious Office I muſt own it) at little Expence, and doubtleſs it is our Duty to conſult his Ability with his Sickneſs. Wherefore in the ſimple or putrid *Synochus* ſo call'd, I preſcribe the *Pulv. e chel. C. C. Sed ſine Bez.* for the Συνοχὸς, *ubi res ſunt anguſtæ Domi*, the *Lapis contray. & Conſ. Lujulæ*, with ſome ſimple Diluent, as the Sage Tea, to waſh down the ſame.

If you ſhould now aſk me, ſince in many Things I copy after him, why I have not follow'd *Sydenham* in remarking the various *Conſtitutions* of late Years, productive of divers *Epidemical Diſeaſes*: I muſt acknowledge, that I have been leſs mindful in obſerving the ſeveral particular *Phænomena* of ſuch as have happen'd for the twenty or thirty Years laſt paſt, much leſs from the *Epocha* wherein that Author concludes his Hiſtory, than I ought to have been; Nor do I remember any ſuch to have fallen under my Obſervation, as have indicated this diverſe *Regimen*, the one I mean

of

of being treated with *Bleeding* and *Purging*, alternately repeated, and not by *Diaphoretics*, the other *vice verſa*, otherwiſe at leaſt than as reducible to thoſe two general *Claſſes* of *Sanguineous* and *Nervous*: By the firſt, intending the *Inflammatory*, ſuch as the *Quinſy*, *Pleuriſy*, *Peripneumony*, with the *variolous* and *morbillous* Fevers, wherein the firſt of theſe Methods was for the greater Part requir'd: By the laſt, thoſe *Malign Eruptives*, the *Rubeolæ*, the *Raſhy* or *Marbly*, the *Miliary*, and which is ſtill worſe, the *Petechial*: Each of which I have in ſeveral parts of this Diſcourſe, call'd by the Name of *Febris Malæ Indolis*, *vel Mali Moris*, and which have requir'd the *Cordial Alexipharmicks*, and temperate *Sudorificks*.

I know that Dr. *Sydenham* was ſo prejudic'd againſt this word *Malignity*, that he thought it almoſt the conſtant Offspring of a *hot Regimen* or of *hot Remedies*: Whereas I have obſerved theſe Appearances, I may ſay, many ſcores of Times, on thoſe Bodies who have uſed neither *Hot* or *Cold*: But (as I have already taken Notice) have ſunk rather by Means of ſome Evacuation, ſuch as *Bleed-*

ing and *Purging*, and keeping out of Bed, without any *Regimen* whatever.

As to any particular Fever raging thus *Epidemically*, notwithſtanding ſeveral have appear'd in ſo long a Space: Yet I cannot call to Mind that they have fallen out in any regular Series. This I know, there have been divers Seaſons within that compaſs of Time, in which both Sorts, *viz.* the *Inflammatory* and *Nervous*, have been very popular, as well as fatal, particularly of the firſt Kind, the *Small-Pox* and *Meaſles*. And albeit, the firſt of theſe is uſually more deſtructive, and makes the greater Slaughter among us, yet we have had thoſe *Conſtitutions* which have been at Times more productive of theſe laſt, *viz.* in the Year 1733, when they exceeded the *Small-Pox* in the following Proportion, as appears by a Weekly Bill now before me, where from *March* 27, to *April* 3, I find there deceaſed of the *Meaſles* 40, of the *Small-Pox* 16. About the ſame Time appear'd that *Epidemick Inflammatory* Fever, which from the Parts affected, was by the common People, named the *Sore-Throat* Fever, by Phyſicians, *Febris Catarrhalis* alſo the

Pulmonary and *Peripneumonic* one, as it was indeed to many of the Sufferers, like that which *Sydenham* takes notice to have happen'd in the Year 1675. But the moſt remarkable, howbeit of the ſlighteſt Conſequence, amongſt the *Epidemicks* of this laſt Age (at leaſt in my Remembrance) was that in the Year 1712, of which, a Nameſake of mine publiſh'd a ſmall Tract at that time, entituled, *De Febre Britannica Anni* 1712 *Schediaſma*; of which he writes as follows.

Apud Britannos, *Caput extulit Febris quædam Epidemia, genii mitioris, nec quod fando audiverim alicui fatalis: ſed quæ ita longe lateque imperium continuavit, ut pauculas admodum familias reliquit liberas intactaſve, jam licet vires ſuas depoſuiſſe videatur.*

The Symptoms he recites are theſe, *Cephalalgia vehemens, aut ſaltem Capitis gravedo, dorſi dolor æſtuans, interdum frigore lancinans, aliquando in Artubus dolores rheumaticorum æmuli, Inappetentia, vomituritio, Stomachi ac inteſtinorum dolor*, &c.

This Fever from the Mildneſs of the Symptoms and ſhort Duration, was termed by ſome, *Febricula Feveret*, or the *little Fever*,

Fever; alſo *Ephemera Mitis*: for as that mentioned by *Cajius*, in his *Ephemera Britannica*, or *Sudor Anglicus*, made a Sweep as it were all over the Nation: So this leſſened us not ſcarcely by a ſingle Inhabitant, if any tolerable *Regimen* was obſerved. This ſeems to be the ſame with that called the *Dunkirk Fever*, as ſuppoſed to be brought thence by the Soldiers who had been there.

Now as all theſe partook more or leſs of an *Inflammation*, ſo for the moſt part, they were taken off by *Bleeding*, *lenient Purging*, and the temperate or cooling Method in general, together with *Bliſtering* in the *Catarrh*, *Sore-Throat*, and *Pulmonary* Affections, as alſo *Linctus's* and *pectoral Ptiſanes*.

We come now to the Nervous and Malign Eruptives, without which we have ſeldom been for any long Time, any more than the *Small-Pox*, which therefore may be deem'd *Stationary* among us: Though at ſome times more *epidemical* than at others, as ſome *morbid Fomes*, breaking forth the Bowels of the Earth, has not only engender'd, as I may ſay, but ſpread the *Contagion* among us, which was very ſenſibly felt about ten

Years

Years paſt, or when Dr. *Strother* publiſh'd his Tract which he entitul'd *Practical Obſervations* on the Epidemic Fever then reigning: But which in my Opinion, have a juſter claim to *Theoretical*, *Chymical*, and *Mechanic* ones. For ſetting aſide theſe kinds of *problematical Solutions*, with his preliminary *Axioms*, foreign ſurely to a *practical Diſcourſe*, I doubt the Reader will gather little Inſtruction, either as to the *Cauſe* or *Cure* from thence. But our *Sydenham* has ſo well deſcrib'd theſe Writers, with their *Metaphorical* Terms and *quaint Expreſſions* (as he terms them) that I need not enlarge farther thereon, yet muſt obſerve to you, that beſides the *Epidemick*, and the *Stationary* Fever, there are certain others which he calls *Intercurrents*, and which he divides by the grand Seaſons of the Year, as the *Winter Fever*, the *Vernal* and *Autumnal*.

'The firſt of theſe, he takes Notice to be 'the Effect of obſtructed Perſpiration, whence 'the Pores of the Skin being ſhut, and the 'Blood wanting its uſual Tranſpiration, be-'ing burthen'd with a heap of ſerous Hu-'mours, a feveriſh Commotion is ſoon kindled

'there-

‘ therein, the Matter thus abounding, in-
‘ flames the Breaſt, and a *Peripneumony* or
‘ *Pleuriſy* thence ariſes. If leſs in quantity
‘ the following Complaints, *viz.* the Sick at
‘ the Beginning is ſometimes hot, at others
‘ cold, he cries out of Pains in his Head
‘ and Limbs, grows reſtleſs, his Tongue is
‘ white, his Pulſe little differing from that
‘ of a ſound Perſon, his Urine thick and
‘ red, his Blood fizy like that of *Pleuriticks*,
‘ he is troubled with a Cough, difficulty of
‘ Breathing and oppreſſion on the Cheſt, tho'
‘ not to the Degree as in the true *Peripneu-*
‘ *mony*. And this (ſaith our Author) I call
‘ the *Winter Fever*, which though ariſing
‘ meerly from taking Cold, and attended at
‘ firſt with no other Symptoms, yet draws
‘ along with it a Train of Ills, which at
‘ length deſtroys the Sick, when confin'd to
‘ his Bed, and puniſh'd with I know not
‘ what cordial Things, in order to force out
‘ Sweat: Whence *Delirium*, *Lethargy*, *dry*
‘ *Tongue*, *red Spots*, and ſometimes *livid*,
‘ which are now imputed to I know not what
‘ Malignity, though owing meerly to Miſ-
‘ management. For this Fever having too

‘ much

'much in its own Nature of *Malignity*, the 'Blood is ſtill more fired by *Cordials* and 'keeping in Bed, ſo that the Spirits are 'driven into Confuſion and inordinate Mo-'tions, whilſt the morbifick Matter being caſt 'upon the Brain, all Things go to wreck.

After the *Winter Fever*, comes the *Vernal* or *Spring Fever*, moſt fertile in the *Meaſles*, and other Inflammatories, from ſome Alteration ſtill in the foreſaid Perſpiration, as the *Autumn* for the *Small-Pox*, *Intermittents* and *Dyſenteries*; between which are the *Mid-ſummer* Months, as *June* and *July*: Concerning the laſt of which, our Author has theſe Remarks.

'It is always to be noted, that notwith-'ſtanding the manifeſt Qualities of the Air 'cannot force any *Conſtitution* ſo as to pro-'duce an *Epidemical Diſeaſe* that properly 'belongs to it, for theſe flow always from 'ſome hidden Diſpoſition thereof, yet for a 'Time they have Power over them: And 'thus *Epidemicks* may be admitted or ex-'cluded, as thoſe manifeſt Qualities favour 'or oppoſe them: But the general *Conſtitu-'tion* ſtill remains the ſame, whether they

'pro-

'promote or in ſome ſenſe retard it. Upon 'which Account it is, that whenever *Epi-* '*demicks* happen in one and the ſame *Conſti-* '*tution*, this or that particular Diſeaſe ap- 'pears chiefly in that Seaſon, to which the 'ſenſible Qualities in the Air have aſſign'd 'it; and at length gives Place to another, 'which the different Qualities of the ſubſe- 'quent Seaſon calls in: by which Means it 'comes to paſs, that the *Stationary Fever*, 'whatever it may be, that belongs to the '*Epidemick* of that Year, chiefly rages in '*July*, or the Beginning thereof, when it 'ſeizeth many: But at the approach of *Au-* '*tumn*, it gives way to the general Fever 'then popularly prevailing, which denomi- 'nates the Seaſon, and is leſs troubleſome, as 'every Year plainly demonſtrates: For as 'Men's Bodies being heated by the forego- 'ing Summer, the Fevers which are proper 'to the general *Conſtitution*, eaſily invade at 'that Time, yet at the coming of *Autumn*, 'the prevailing *Epidemick* reſumes the Go- 'vernment, and they quite recede.

'Again, as the foreſaid Fevers take their 'Riſe in this Month, viz. *July*, from the

'more obvious Qualities of the Air, ſo 'alſo various Symptoms that are contrary 'to their own Nature, as depending on ſuch 'general *Conſtitution*, are borrowed from 'thoſe manifeſt Qualities, happening in this 'Month. And upon this Account it is, that 'in thoſe Years, wherein the ſaid Fevers 'ſeize upon a great many, they are accom-'panied with various new Symptoms, be-'ſides thoſe which are proper to them as 'depending upon ſuch a general *Conſtitution*: 'Yet they continue the ſame, tho' the Vul-'gar, by reaſon of the Diverſity of thoſe 'Symptoms, reckon there is a new Fever 'every Year, which peculiar Symptoms at-'tend only for a few Weeks, and the reſt 'of the Year thoſe proper ones are con-'ſtantly met with ſingly, which befal them 'as they are *Stationary Fevers*, of ſuch or 'ſuch a *Conſtitution*.'

Give me Leave to obſerve farther upon this Head of monthly Fevers, that the latter End of *Auguſt* and the Beginning of *September* are the proper and cuſtomary Seaſons for that very acute Fever (*Epidemical* in ſome Years) the *Cholera Morbus*; as if (in the ſame Author's

Author's Words) there was ſomething peculiar at theſe Times, or from ſome hidden Cauſes rather than the ſenſible Qualities of the Atmoſphere ſurrounding us, or any Treſpaſs in the *Nonnaturals*, prediſpoſing the Juices of our Bodies, particularly the bilious, to this preternatural Fermentation or inteſtine Commotion.

There are ſome who have imputed this Diſturbance to ſurfeiting with Fruits, then uſually abounding, as among others, the *Cucumber* and *Melon*, ſome to the haſty drinking of cold Liquors when heated with Exerciſe; but that theſe or the like are not always the Occaſion of this Diſorder, appears hence evident, that the moſt temperate and regular in their way of living, have been alike afflicted with thoſe who have ſo treſpaſs'd. For Inſtance, one of the former goes to Bed well, and in the Night is ſeized ſuddenly, at this time of the Year, with enormous Vomiting and Looſeneſs, by which in few Hours, if not aſſiſted by Art, he is preſently thrown into cold Sweats, Cramps and Convulſions, which carry him off before Morning, as I have known the Caſe, whilſt

his Neighbour, who had poſſibly indulged as aboveſaid, perceives no Harm from thence.

But Thanks to a kind Providence, we have had no raging *Cholera* for ſome Years paſt, any more than a *dyſenterick Fever*, nor ſcarce indeed any other, deſerving the Name of an *Epidemick*, unleſs the *Morbillous* and *Varolous*, together with the *Intermittent*. The firſt may be ſaid at this Time, *June* 1737, to be epidemic, tho' not ſo mortal as in 1733. The ſecond, tho' now alſo prevailing more than ordinarily, has been a kind of *Stationary*, keeping pretty near to the ſame Tenure, through all the Quarters of the Year, notwithſtanding the great Heat in the Beginning of *May*, with as intenſe Cold at the End, and at the Entrance of *June*, when one Day has been extreme cold, and the next as exceeding hot: Our Nights the ſame. A manifeſt Proof this, that not always the obvious Qualities of Heat, Cold, Moiſture, &c. but rather ſome imperceptible Effluvia breaking forth the Bowels of the Earth (which I rather incline to than a *Sydereal* Influx) and polluting our *Atmoſphere* with certain Particles, diſagreeable at ſome times to the Bodies of Men;

Men; at others (as we have found them) to thoſe of Brutes, more eſpecially the black Cattle, as they are called, give riſe to the ſeveral Species of *Epidemical* Diſeaſes, under ſuch Influence, or within their Reach: And that the *Fomes* itſelf, however the Blood may happen to be diſpoſed for receiving their Impreſſion, is not ingenite but adventitious, is plain from that Remark of the ſame Writer, "that if a Stranger juſt before in a ſound "State of Health, ſhall viſit any Town or "Place infected, or under the malign Con-"ſtitution of ſuch an *Atmoſphere*, he will in "all Likelihood, partake the Fate of the "ſame Place." Be this however as it may happen, the ſeveral Seaſons muſt not be overlook'd: Not ſo much reſpecting the ſenſible Qualities of the Air, as thoſe ſecret and hidden Properties, inimical to us, and which favour one rather than another Diſeaſe. For if we may credit that accurate Obſerver of *Nature*, in the Production of Diſeaſes, "tho' "there are ſome which appear at any Time, "and which may be denominated *Intercur-*"*rents*, yet others by a ſort of occult In-"ſtinct, as it may be ſaid, of *Nature*, fol-

"low ſome certain Seaſons, as ſome Birds "and Plants." A Speculation which he thinks too much neglected by Phyſicians, tho' if purſued, I fear would be found inveſtigable.

Whilſt theſe Sheets were under my Reviſal, an Opportunity has preſented for my giving you a light Sketch of a new *Epidemick*, uſher'd in with the laſt *September* 1737, or rather beginning to ſhew itſelf in the laſt Week of *Auguſt* preceding the ſame: Upon which, before I make any Remarks, I ſhall take Notice however of the Temper of the Air at that Time, that the better Judgment may be form'd how far the Qualities thereof as to *Heat* or *Cold*, or ſome other to us inſenſible Properties therein, gave Being thereto.

You know, Sir, that the whole Month of *Auguſt* was unuſually cold, even our *Dog-Days* (as they are call'd) when commonly we find the greateſt Degree of Heat, were remarkably ſo, till the Entrance of *September*, which came in with a cloſe, and, as I may ſay, ſultry Seaſon, and ſo continued through the whole Month, a heavy damp Air, with almoſt continu'd Rains, eſpecially a-Nights, falling

falling all the Time: inſomuch that theſe two Months ſeemed at this Time to be miſplac'd in the *Calendar*, *Auguſt* ſtanding in the Place of *September*, and *September* in that of *Auguſt*. It was about the End of this laſt, that many People complain'd of Pains in their Heads with Giddineſs, attended with a feveriſh Heat, alſo great Liſtleſſneſs and Pains of their Limbs, like thoſe in the Fever of 1712 before obſerv'd; but upon going to Bed, and drinking plentifully of ſome thin diluting Liquor, they fell almoſt inſtantly into profuſe Sweats, which, contrary to that Fever, took off their Complaints generally by the next Morning, and they went about their Affairs as uſual in a Day or two after, without other *Regimen*, unleſs Bleeding, and a little Abſtinence from their wonted Meals.

What I thought worth noticing, was this, that however early theſe Sweats broke forth, yet it was evident by the ſudden Relief they gave the Patient, that they were truly *critical*, and judged *i. e.* terminated the Fever, which therefore in theſe People might be rightly termed a kind of *Ephemera*.

But tho' many had the good hap to come off thus at firſt, yet quickly after the Enteranæ in of *September*, the Fever not only ſpread and ſeized upon whole Families, many at the ſame Time, but the Symptoms of Head-ach and the *Laſſitudo ulceroſa* grew more ſevere and ſtubborn, than at firſt: neither was the *Criſis* ſo near at hand. For notwithſtanding moſt of the Sick were prone, eſpecially when aſſiſted with any gentle Sudorific and warmer Covering than ordinary, to break out into Sweats, yet they perceiv'd not that ſudden Benefit thereby, as at the Beginning; the Fever ſtill continuing for ſeveral Days, before they could get clear. The Pulſe, which at firſt vary'd little from its natural Stroke, began now to beat both ſtronger and quicker, the Urine alſo then ſcarce at all differing from its natural Complection, appear'd more inflammatory, as did the Blood extracted, which was always ſizy, like what we find in the *Pleuriſy* and *Rheumatiſm*, whoſe Pains in ſome meaſure theſe reſembled, tho' they ſeemed rather *nervous* than *humoural*, very rarely attended with a Swelling on the Parts affected.

Beſides

Beſides theſe Complaints of the Limbs and Head, many of the Sick were troubled with an Inflammation on the *Uvula* and *Tonſils*, tho' not to that Height as in the *Winter-Fever* four or five Years paſt.

And this, Sir, was our Condition within the Bills of Mortality, in regard to our ill State of Health, occaſion'd by the preſent Epidemic Sickneſs in this City, from its firſt Appearance in the latter part of *Auguſt*, to the cloſe of this preſent *October*, when the cold Weather, with a clearer and dryer Air, ſeems in great meaſure to have extinguiſh'd the *Fomes*, at leaſt has given a Check thereto: I ſaid within the Bills of Mortality, becauſe I have made my Calculation thence, altho' I know the ſame Fever reach'd unto diſtant places.

It is from theſe Bills I perceive that in the Height of this Sickneſs, about the midſt of *September*, they were almoſt double to that of a healthful Standard: having then reach'd to 861, as appears by that from *Tueſday* the 13th, to the *Tueſday* following, viz. the 20th, and that the ſame Encreaſe was owing to the particular Article of *Fevers*, you will collect from the following Bills:

6.	Fever	161.
Sept. 13.		201.
20.		229.

From hence they began to decreaſe in the ſaid Article, in Proportion, to the 25th of *October*, where the ſame is enter'd 191.

And what I obſerv'd farther of this Fever was, that, when at the higheſt, as on the 20th of *September*, the *Small Pox* was got up to 80, more than double the Number to that in the Week following, when the Fever was fallen to 167, the *Small Pox* to 31, as if there was ſome Affinity in the inflammatory *Pabulum* or *Fuel* giving riſe to both, or that each partook, at leſt in ſome Degree, of the ſame Inflammation.

I now come to the Method of Cure, and, as the common People in all ſudden Attacks from an obſtructed Perſpiration, or what they call catching of Cold, fly uſually to the *Treacle Water* and *Syrup of Saffron*, in order to force Sweats, ſo did they commonly at this Time, and with better Succeſs alſo than in the *Variolous Fever*, wherein they too often place their Confidence, to the Deſtruction of the Patient.

Patient. For as this Fever was ſo naturally determin'd by theſe early Sweats, this Remedy with plentiful diluting, both forwarded this Diſcharge, and ſupported the Sick under the ſame; differently from that other Sickneſs, which requires a longer Time in the *Apparatus*, as well as for the Expulſion of the morbid Particles, and which, by this early Colliquation, confounds Nature, and (as obſerv'd but now) deſtroys the Sick of thoſe Diſeaſes.

The next Day, if they found themſelves no better, or that the Pains continue, they let Blood, and, two or three hours after, take a Purge, which finiſhes the *Regimen*, and by which, with a little Abſtinence, many of theſe People got the better of their Illneſs.

The Method which I took with them, was the following, viz. if I was ſent for at the Beginning, which was but ſeldom, I preſcrib'd *Venæſection* to ℥ix or x, and the ſame Evening a Draught *ex* ℥j. *Aq. Lact. Alex.* ℥ß. *Aq. Theriacal. cum* ℥j. *Syr. Limon. &* ℥j. *Pulv. e chel. cum.* C. which was repeated in the Morning, the Patient keeping in his Bed, where the Sweat, as aforeſaid, breaking eaſily

forth, quickly freed the Sick of his Complaints, at leaſt for the moſt part, aſſiſted by the free drinking of ſmall diluting Liquors, and a few Days Abſtinence: But if the Pains continu'd on the third Day, I repeated bleeding, and where the Head was much affected, or the Thorax inflamed, a Bliſter was applied *inter Scapulas*; tho' it was not often at this firſt Appearance of the Diſtemper, that either this ſecond bleeding or bliſtering was call'd for: In the mean Time, if the Body was coſtive, I gave ʒß of *Lenitive Electuary* with a Draught of thin Gruel or of his Sack-Whey, which rarely fail'd of procuring one Stool and ſometimes two.

When the Patient was afflicted with *ſpaſmodick* Pains on the Cheſt, as well as thoſe of his Limbs, I found *Volatiles* gave the ſpeedyeſt and the greateſt Relief, ſuch as the *Sal Volatile C. C. gr.* vi. *vel* viij. *cum* ℈j. *Sper. Ceti ac tantillo Syrupi cujuſlibet pectoralis*, or the *Volatile Cream* compos'd in the following Manner:

℞ *Aq. Pulegii, Ol. Amygd. dulc. ana* ʒij. *Spir. C. C. per ſe* ʒj. *Syr. Balſ. Tolut.* ʒß. *M. phialam perper concutiendo.*

Of

Of this the Patient took a large Spoonful every three or four Hours, with a warm Draught of a common pectoral Apozem drank upon the ſame: Which I have known to ſucceed well in the *Rheumatiſm* alſo, eſpecially where the Trunk of the Body happens to be affected.

But altho' theſe and the like Methods took Place at the firſt Onſet of the Diſeaſe, yet after thus raging for a Month or five Weeks, as I obſerv'd but now, it not only prov'd more ſtubborn, but began to appear more threatening and of a malign Diſpoſition. The Sweats were interrupted, going off and coming on by Turns, or when continued, ſeem'd rather ſymptomatical than critical: Nature now aiming at a different Diſcharge of the morbid Particles, either by *Inflammation* or *Abſceſs*; by the firſt I mean the *Eriſipelas*, either on the Face, Legs or Arms: By the laſt the *Phlegmon*. Of the former I viſited four Perſons on the ſame Day, with their Faces ſo ſwell'd that they could not ſee; two of them died comatoſe, the Inflammation extending itſelf on the *Meninges Cerebri*: The other two got over it, tho' with great Hazard of their

their Lives. Two others I was call'd to with the Inflammation on their Arms after bleeding, where, although no Error had been committed by the Lancet, the ſame with Tumefaction encreaſing, a Mortification enſu'd, and deſtroy'd both. So prone was the Blood at this time to a gangrenous Diſpoſition, that though the *Cephalick* Vein had been open'd in both, the Tendon clear, and the Orifice not ſo much as feſter'd, nor in the leaſt painful, yet a Fluxion (invited by the Ligature rather to that than the other Arm) came preſently on and killed the Patient. The ſame Surgeon who attended one of theſe, told me he had a third upon the like Occaſion, had compounded for Life by a large *Phlegmon* he had then juſt open'd below the Cubit. Theſe Inſtances made me very circumſpect how I directed *Phlebotomy* after, to theſe Patients: Preferring *Bliſtering* and temperate *Alexipharmicks*. I had a Patient in *Shoreditch*, where an *Eryſipelas* fell upon the Leg, and after that was diſcuſs'd, an *Abſceſs* ſoon after form'd itſelf higher upon the ſame Limb. About the ſame time I was told by a Surgeon in *Spittlefields*, that he then attended

tended two Patients, the one with an *Abſcess* in the *Axilla*, the other in *Inguine*: Both critical Tranſlations of this then reigning *Epidemic* Fever. Theſe Matters duly weigh'd, gave me ſome Apprehenſion that thoſe Symptoms might be the Foterunners of ſome ſtill more contagious and fatal Sickneſs, eſpecially having obſerv'd on two or three Patients the true *Petechiæ*, a Day or two before they died. And examining our Bills I found that Article of the *Spotted Fever*, in every one after the ſecond Week of this Fever appearing among us: Where on the third Week are enter'd 5. on the fourth 6. the fifth 3. the ſixth 5. the ſeventh 2. the eighth again 4. the ninth 3. And tho' I pay not much regard to our *Searchers Reports*, who often miſtake the *Rubeolæ*, *Moles* and *Fleabites*, for theſe Spots, yet having myſelf been a Witneſs of them, I am rather inclinable to believe there was too much ground for ſuch Report. However the approaching Winter may very probably check the farther Progreſs of this *Epidemick*, and render (it is to be hoped) theſe Appearances leſs frequent among us.

About

About the time when this Fever was at the heighth, the following Caſe preſented, which by reaſon of ſome *anomalous Symptoms*, and the length of Time it ran out, I kept the *Diary* with which I here preſent you.

A Gentleman about 40, of great Worth and Repute among his Neighbours, was ſeized with an *Eryſipelas* on his Foot and Leg, together with a Symptomatick Fever, for whom I preſcrib'd as follows.

℞ *Summit. Centaur. Hyper. Flor. Chamomel. Melilot. Sambuc. a Mj. Coqtr. in aq. Font. q. s. pro Colaturæ* ℔iij. *cujus tertia pars reducatur ad Pultem cum q. s. Farinæ Fab. dum reliqua pars reſervetur pro Fotu, addendo tempore Uſus Spir. Vini Camphorat.* ʒij. *ſingulis ejuſdem libris, et illinendo partes inflammatas, (poſt Uſum Fotus) cum litu ſequenti priuſquam Cataplaſma applicetur.*

℞ *Ungti, e flor. Sambuci* ʒj. *Spir. Vini Camph.* ʒij. *m. f. Linimentum,*

Having

Having thus provided for the topical Application, I directed this Cordial Draught.

℞ *Aq. Lact. Alex.* ℥j. *Theriacal.* ℥ß. *Syr. Croci* ℥j. *pulv. e chel. Canc. C.* ℈j. *m. f. Hauſtus, ſumendus Veſperi et repetendus Mane.*

Sept. 16, 1737. D. T.

For Mr. ——

The next Day, the Inflammation ſeeming to give way; in order to carry off the bilious Humour, by a lenient Purgation;

℞ *Tinct. Rhei Vino alb. Extr.* ℥j. *Syr. Roſ. Sol.* ℥ß. *m. f. potio Graſtino Mane ſumenda.*

Sept. 17, 1736. D. T.

For Mr. ——

The Day following, obſerving he had only one phyſical Stool from the former Potion;

Repetatur Tinctura Rhei Graſtino Mane, et ſic ad alias alias Vices, (pro modo Operationis,

tionis) ſingulis vel Alternis Auroris, ſumendo Hauſtulum Cordialem ſingulis noctibus.

Sept. 18, 1737. D. T.

For Mr. ——

By theſe, the Inflammation was diſpers'd, and I thought all danger over, having taken my leave: But on the 23d I was ſent for again, and found my Patient's Fever return'd, his Head in ſome Diſorder, and his Spirits as it were hurried. Upon which I wrote the following Bill:

℞ *Aq. Lact. Alex.* ℥iß. *Theriacal.* ℥ß. *Syr. Croci* ʒj. *pulv. Lapidis contray.* ℈j. *Caſtor. ruſ. opt. gr.* v. *Sal. Vol. ol. gut.* x. *m. f. hauſtus, ſumendus et repetendus ſexta quaque hora.*

Applicetur Veſicatorium inter Scapulas h. ſ.

℞ *Aq. Lact. Alex. Ceraſ. Nigr. a* ℥iv. *Pæon. C.* ℥ij. *Margarit. pp. Sacch alb. a* ʒj. *m. f. Julapium. Cujus capiat Cochl.* iv *in languoribus, Vitrum agitando tempore Uſus.*

Sept. 21°, 1737. D. T.

For Mr. ——

The next Day being inclin'd to Stools, the following Proviſion was made for the ſame:

℞. *Aq. Cinnamom. ten.* ℥ij. *Conf. Fracaſt. ſ. m.* ʒj. *f. mixtura in promptu, cujus capiat Cochleare largum (phialâ priùs agitatâ) poſt ſingulas ſedes liquidas. Pergat cum hauſtibus ultimo præſcriptis nec non Julapio perlato in languoribus.*

Sept. 22°, 1737. D. T.

For Mr. ——

On the 23d, falling into profuſe Colliquative Sweats, and his Bowels ſtill over lax,

℞ *Julapii Cretacei Bat.* ℔j. *Aq. Cinnam. ten.* ℥ij. *m. f. Julapium. Cujus (Vitrum concutiendo) capiat Cochl.* v. *vel* vi. *in intervallis, præcipue poſt ſedem liquidam, aut Sudoribus oppreſſus.*

Sept. 23°, 1737. D. T. *For Mr.* ——

Pergat cum Reliquis.

On the 24th, he complain'd of a Pain on the upper part of his left Thigh, on

the inſide, ſtretching up to the Groin where, upon preſſure, we diſcover'd an Induration deep among the Muſcles; but no Inflammation, which we order'd to be well embrocated with the *Opodeldoch* Ointment, and preſcrib'd only as follows.

Repetatur Hauſtus Cordialis ultimo præſcriptus.

Sept. 24°, 1737. D. T.

For Mr. ——

The Day following, his Complaint on the Thigh continuing, the part was cover'd with a Plaiſter of the *Gums*, in hopes either of diſcuſſing or bringing the Tumour to *Maturation*, and the ſame *Alexipharmic* Draught, as before, with a lenient *Clyſter* in regard now, of his Over-coſtiveneſs, *ex* ℥j. *Elect. Lenit. et* ℥xij. *Decoct. Com. pro Clyſtere*, but on the 27th he grew ſtill more languid, his Pulſe flagging ſo that in Conſultation this Day with Dr. *Jurin*, it was concluded a warmer Medicine was requir'd, together with the *Volatile Salt*, in order to throw out the Malignity by the Pores, and to aſſiſt Nature

in

in forwarding an *Abſceſs*, which ſhe ſeem'd to aim at, but had not ſtrength to compaſs. For which end the Induration was now cover'd with a Plaiſter of the *Mucilages*, ſpread thick with a broad adheſive Margin, to ſecure the ſame, and Bliſters to the Arms.

The Draught here follows.

℞ *Sal. Vol. C. C. gr. vj. Conf. Raleighanæ* ℈j. *Aq. Lact. Alex.* ℥ß. *Theriacal.* ʒß. *Syr. Croci* ʒj. *m. f. Hauſtus, vj*ª *quaque hora repetendus.*

Continuetur Uſus Julapii perlati, in languoribus.

Sept. 27, 1737. J. J. D. T.

For Mr.——

But his Stomach refuſing the Volatile Salt, this Bolus was the next Day ſubſtituted in its place, and continued on the 29th.

℞ *Pulv. Lapidis contray.* ℈j. *Croci angl. Caſtor. rus. ana gr.* v. *Conf. Alker. q. s. m. f. bolus* vi ª *quaque hora ſumendus cum*

Cochl. iv. *Julapii perlati quod in promptu eſt.*

Sept. 28, 1737. J. J. D. T.

For Mr. ——

On the 30th he was ſeized with a Convulſive *Rigour* and a *Singultus* intervening, when we directed thus:

℞ *Flor. Chamomel. pulv.* ℈j. *Sal. Abſinth.* ℈ß. *Ol. Nuc. Moſcat. Chym. gut.* i. *Syr. Croci q. ſ. m. f. bolus ſtatim ſumendus et repetendus quarta quaque hora cum Cochl.* iv. *Julapii perlati.*

Sept. 30. 1737. J. J. D. T.

For Mr. ——

The *Rigours* now returning oftner, and at uncertain Periods, as well as the *Singultus*,

℞ *Phylon. Rom. gr.* xv. *Aq. Lact. Alex.* ʒjß. *Aq. Pæon. C. Syr. Croci ana* ʒij. *Sal. Vol. Ol. gut.* xx. *m. f. Hauſtus ſexta quaque hora repetendus, niſi prius ceſſaverit Singultus, quum pergat in Uſu Bolorum heri præſcript. addendo ſingulis, Caſtor. gr.* v.

Applicentur Epiſpaſtica Brachiis infra Cubitos.

℞ *Aq. Regin. Hungar. Laud. liquid. ana* ℥j. *Camphor.* ʒß. *m. pro Epithemate ad Scrobiculum Cordis & ſuperponendo pannum Scarlatinum ex eodem expreſſum.*

Oct. 1, 1737. J. J. D. T.

For Mr. ——

On the ſame Evening finding theſe nervous Complaints increaſing, I preſcrib'd by myſelf.

℞ *Tinct. Sacræ* ℥jß. *Tinct. Caſtor.* ʒj. *Syr. Pæon. C.* ℥ß. *m. et capiat Cochleare largum ſtatim et alterum Bolorum ſpatiis intermediis uſque dum Alvus fuerit ſolutus.*

Oct. 2. D. T.

The *Hickup* now exceeding tireſome by its frequent Returns;

℞ *Sal. Vol. C. C.* ℈j. *Moſchi gr.* v. *ſolve in Aq. Ceraſ. Nigr.* ℥iij. *Pæon. C.* ℥j. *Syr. Croci* ʒij. *m. ſumat Cochlear unum redeunti ſingultu, et pergat in uſu Hauſtus heri præſcript. ſexta quaque hora.*

I ſhould obſerve, that the Day before, upon taking off the Plaiſter, the Induration was inſenſibly diſſolv'd; the Tumour falling lower down, ſo that deſpairing now of any *Apoſtematian*, we order'd the whole Limb to be well embrocated with the foreſaid Ointment, and wrapping the ſame up in Flannel, heard no farther Complaint thereof.

On the third, in regard of his over-coſtiveneſs, we wrote as follows:

℞ *Tinct. Hier.* ʒvj. *Syr. Roſ. Sol.* ʒij. *m. f. potio ſtatim ſumenda. Repetatur Hauſtus ex Phylonio hora* v^{a} *pom. et* vi^{a} *matutina cum bolo ultimo præſcripto hora* xi^{a} *mane in Cochl.* iij. *aut* iv. *Julapii præſcript.*

Oct. 3, 1737. J. J. D. T.

For Mr. ——

The ſame Evening, however, finding him exceeding faint with a depreſs'd ſtaggering Pulſe, tho' he reaſon'd ſtrongly, and was able to turn himſelf in Bed, I varied the Preſcription thus:

℞ *Aq.*

℞ *Aq. Lact. Alex.* ʒiß *Theriacal.* ʒß *Syr. Croci* ʒij. *rad. ſerpentar. Virg. pp.* ℈ß. *Conf. Mithridat.* ℈j. *m. f. Hauſtus ſumendus ſex horis elapſis poſt hauſtum ultimo præſcript. et repetendus dein ſexta quaque hora.*

Oct. 3, 1737. D. T.

For Mr. ——

The next Morning meeting again in Conſultation:

℞ *Conf. Mithrid.* ʒß. *Sal. C. C.* ℈ß. *Aq. Ceraſ. Nig.* ʒij. *Pæon. Syr. Croci ana* ʒij. *m. f. Hauſtus ſexta quaque hora repetendus.*

Applicentur Epiſpaſtica Suris internis.

℞ *Rad. ſerpent. Vir.* ʒij. *Coccinel. gr.* vj. *Aq. Theriacal.* ℥ß. *infunde calide ac clauſe. Colaturæ adde Syr. Croci* ʒß. *et ſumat Cochleare unum Hauſtuum ſpatiis intermediis.*

Oct. 4, 1737. J. J. D. T.

For Mr. ——

On

On the fifth we found our Patient as the Day before, in the ſame weak and declining State, and preſcrib'd in Form following:

℞. *Conſ. Raleighanæ* ℈j. *rad. ſerpentar. Virg.* ℈ß. *Syr. Croci q. s. m. f. bolus ſumendus et repetendus ſexta quaque hora cum Julapio ut priùs.*

℞ *Empl. Cephal. p. tres: Epiſpaſt. p. unam m. f. Emplaſtra totis pedibus applicanda.*

Oct. 5, 1737. J. J. D. T.

For Mr. ——

On the ſixth his *Spaſms* remitting, as alſo the *Singultus*, he complain'd of an inceſſant Cough, which had hinder'd his Repoſe the Night preceding, attended with a Catarrh, ſo that he was diſcharging a clear Lymph rather than Phlegm or Mucus: as if Nature miſcarrying in her firſt *Criſis* by the *Eryſipelas* on the Leg, as well as her ſecond from the threatning *Phlegmon* on the Thigh, was now aiming at a Deſpumation of the Blood by this Glandular Secretion from the *Larynx*, *Pharynx* and other the extreme Parts of the *Fauces*, to moderate

derate in ſome meaſure the *Stimulus*, and make Revulſion of the Humours from the ſaid Parts, we preſcrib'd now in this Manner:

℞. *Ol. Amygd. d. Syr. de Mecon. ana* ʒj. *Conſ. Roſ.* ʒij. *m. f. Linctus de quo ſumat Cochleare unum ſubinde, vel magis urgente Tuſſi, ſenſim deglutiendo, et poſtea bibat Hauſtulum calidum Decocti Pectoralis communis.*

℞. *Aq. Lact. Alex.* ʒjſs. *Theriacal.* ʒſs. *Syr. Croci* ʒij. *Conſ. Raleigh.* ℈j. *rad. ſerpent.* ℈j. *m. f. Hauſtus ſexta quaque hora ut antea.*

Applicentur Epiſpaſtica juxta Aures.

Oct. 6, and 7. J. J. D. T.

For Mr. ——

Which Preſcription was purſued the Day following.

Upon this laſt Day, in the Evening, when I made him a Viſit by myſelf, I found him complaining of ſome Difficulty in ſwallowing, his Speech being alter'd, which made me now appre-

apprehenſive her laſt Effort would be an *Aphthæ*: and upon inſpecting his Throat, I diſcover'd the *Uvula* tumid and inflam'd, and the Parts about lin'd with a tough *Mucus*: when coming again the next Morning, I perceiv'd the Thruſh extending over great Part of the Arch of the Palate, as well as on the *Tonſils*; wherefore I immediately order'd the Gargariſm here enter'd to be thrown frequently in with a Syringe.

℞ *Decoct. Pectoral.* ℔j. *Mel. Roſ.* ℥j. *m. pro Gargariſmo quo frequenter utatur.*

On the 8th, in Conſultation, finding he had been ſeveral Days without a Stool:

℞ *Elect. Lenit.* ℥j. *ſolve in Decoct. Com.* ℥xij. *et f. Enema injiciendum Veſperi, niſi prius depoſuerit Alvum.*

℞ *Conf. Mithrid.* ℈j. *lapid. contray. gr.* xv. *Syr. Croci* ℥j. *Aq. Lact. Alex.* ℥ß. *Theriacal.* ℥ß. *m. f. Hauſtus ſexta quaque hora repetendus.*

Oct. 8, 1737. J. J. D.T. *For Mr.* —

Upon

Upon the 9th looking again into his Throat, we began to deſpair of any ſalutary *Criſis* by this *Aphthæ*, which, inſtead of appearing white, looſe, or tending to Separation, look'd of a duſky Brown, thicken'd and extending itſelf over the inſide of the Cheeks, the Lips and Tongue; and by our Patient's Complaint we had reaſon to believe the whole Paſſage of the *Gula* inveſted therewith: ſo that thinking it a loſt Caſe, we preſcrib'd only the following, with the ſame Gargariſm to be continu'd.

℞. *Conſ. Raleighanæ* ʒj. *Aq. Lact.* ʒiij. *Theriacal.* ʒj. *Syr. Croci* ʒß. *m. ſumat Cochl. duo ſecunda quaque hora.*

Oct. 9, 1737. J. J. D. T.

For Mr. ——

However the ſame Evening, by the Perſuaſion of ſome Friends, a Gentleman was appointed to meet us, who practiſeth mechanically, to whom freely communicating what we had obſerv'd from the firſt, as well as what we had preſcrib'd from Day to Day, in the Progreſs of the Diſtemper, he deliver'd his Opinion that nothing was to be done but by

powerful Alexipharmicks, to keep up Sweats, aſſiſted with more Bliſters. We then enquir'd whether he had any better to offer than what had been adminiſter'd? and that we had never wanted Sweats from the firſt Day to the preſent, which had ſometimes exceeded: nor had we been deficient in bliſtering, as would appear by our Bills. At length hearing us mention that Induration on the Thigh, directing himſelf more particularly to me, you ſhould, Sir, ſaith he, have forc'd an Abſceſs on that Part, which might have ſav'd his Life. I anſwer'd him ſhort, *Necne favente Natura? vel illa monſtrante Viam:* and that I thought he could not be a Stranger to the old Phyſical *Axiom*, *Nil repugnante Natura*, that ſhe might be led, but would not, nor could be forc'd: And farther, that we had encourag'd all we could ſuch *Abſceſs* by the Gum and Mucilage Plaiſters, but to no Purpoſe, the Induration diſſolving under the ſame. That as to ſaving the Patient's Life thereby, it was more than he or any Artiſt could warrant, conſidering its Situation ſo deep among the Muſcles, and ſo near adjoining to the crural Artery, when ſuch Apoſtemation had in all Likelihood terminated

in

in a *Fiſtula*, which, by its Diſcharge, at long run might have brought on a *Maraſmus*, and ſunk him that Way.

After this Veſitation, we enter'd on our Conſultation what could be done farther, and a light Diſpute ariſing, whether the *Rad. Serpentar.* or the *Crocus* was the better *Cardiac* and *Alexipharm?* Our *Mechanician* preferr'd the latter, which was preſcrib'd in the Form following, together with more Blifters, and a Mucilage for the Throat, the ſame Gargariſm to be continu'd.

℞ *Aq. Lact. Alex.* ℥jß. *Theriacal.* ʒß. *Conf. Raleighanæ* ℈j. *Croci* ℈ß. *Syr. Pæon.* ℥j. *m. f. Hauſtus ſumendus et repetendus quarta quaque hora.*

℞ *Mucilaginis tenuioris Sem. Cydon. in Aq. Hordei Extr.* ℥iij. *Syr. de Rub. Idæis* ℥j. *m. et deglutiatur Cochlear gradatim, ſæpius repetendo. Applicentur Epiſpaſtica Suris externis, continuetur Uſus Gargariſmi.*

Oct. 10, 1737. J. J. T. M. D. T.

For Mr. ——

At

At Night his Phlegm growing tough and difficult to raise;

℞ *Decoct. Pect.* ℔j. *Aq. Cinnam. tem.* ʒj. *Oxymel. Scyllit.* ʒß. *m. f. Apozema, cujus bibat Haustulum tepefactum subinde.*

Besides which there was a Mixture *ex* ʒj. *Mel. Ros. et* ʒij. *Tinct. Myrrh.* to touch the Parts of his Mouth and Lips which were now overspread with a deep Gangrenous Slough, if possible to check the Putrefaction; but all to no Purpose, for we might truly some Days before, have pronounc'd the Sentence of *Conclamatum est.*

The eleventh, which was the last of our Consultations, and the last of our Patient's Life, we wrote the following, and took Leave.

℞ *Aq. Lact.* ʒiij. *Theriacal.* ʒß. *Tinct. Serpentariæ præscript.* ʒij. *Syr. Croci* ʒß. *m. Sumat Cochlear. unum frequenter.*

Oct. 11, 1737. J. J. T. M. D. T.

For Mr. ——

You

You will think, perhaps, I am too prolix and particular in reciting a Caſe fatal in the Iſſue thereof; but you will conſider, I hope, that every candid Writer of Obſervations ought to inform his Reader, as well of his bad as of his good Succeſs: otherwiſe the young Practiſer may be ſometimes too bold in his *Prognoſtick*, and to think that in every parallel Caſe, at leaſt ſuch as he may deem ſo, if he purſues the ſame Method of Preſcription, he muſt conſequently ſucceed, and recover his Patient.

I am indeed often jealous of the Sincerity of theſe Writers, who let us into ſo many wonderful Recoveries and great Cures, but conceal all their Miſcarriages and Diſappointments: Beſides, it is neceſſary you ſhould be inform'd of the ſeveral Turns, Shiftings and Changes in a Diſeaſe, by which Nature makes ſome feint Attempts (however fruitleſs) to free herſelf from her Enemy, as well as of the various Forms of Preſcription, to anſwer the ſame general Indication, and to be prepar'd to obviate the various Symptoms ariſing in the ſeveral Stages of the Diſeaſe: For tho', as I have obſerv'd in another Place, when Matters

its moving right, it would be imprudent to alter the Form; yet the Patient growing worst, tho' the same Indication is to be satisfied, yet it is surely prudent, it is, I may say, a very honest and justifiable Amusement, to keep up his Hopes and Expectations, that a new Remedy may effect what the former had fail'd in: and to be able to vary a Prescription in such Manner, will demonstrate the Judgment of the Physician, as well as distinguish him from the illiterate *Empirick*, or ignorant *Quack*, who has often but one Remedy, not only for the same, but even every Distemper whatever, or where-ever seated.

Upon a Review of the foregoing Case, I find there are three material Particulars, wherein I have not been so exact as I might have been, in my Diary thereof, I mean the *Pulse*, the *Urine*, and the *sensible Perspiration*.

As to the first, thro' the whole time of Decumbiture, however quick, the same was even and regular, without *Stop*, *Tremor*, or *Subsultus*, notwithstanding the *spasmodick* or *convulsive Rigours* and *Singultus*, the Urine as little varying from first to last, almost always turbid, and loaded with Contents, sometimes

letting fall a kind of *lateritious* Sediment, like that of the *Intermittent*, but never quite clear at the Top; which gave us Hopes of the *Protei-form Fever* shewing itself at last, and giving us an Opportunity of administring the Cortex. It was now we substituted the *Flores Chamæmel. Sal. Absinth. cum Ol. Nuc. Mosch.* in its place; but a Day or two after, tho' the Sediment remain'd, yet the Convulsions (in which he was still sensible) doubling upon us, with irregular Returns as well as the *Singultus*, we laid even that Remedy aside, betaking ourselves wholly (as you may observe) to the *Cordial* and *Alexipharmick* Medicines. The like Remark might be made on his Sweats, which were seldom off, unless at the Approach of the Spasm, and during its Continuance, thro' the whole Course of the Disease. His Mind tranquil, and his Reason strong till the Day before he died, when he began to falter and lose himself: In a Word, tho' this Fever might be number'd among the *Nervous*, and shew'd itself manifestly of the malign Kind, yet there appear'd no Eruptions whatever on the Skin, whether *rashy*, *miliary*, much less *petechial*, the Matter thereof being so impli-

cated with the Blood and nervous Juice, that tho' she was making several Efforts, yet Nature was unable to separate the same either by a Congestion thereof in one particular Part, or by a Distribution of the same into more subtile and finer Particles, and throwing them out to the Confines the Body.

I offer this long; but I hope no unpardonable Digression, I shall return, secondly, to your Conduct among those who are your Patients, or make use of you when they are sick, where I would never have you over familiar, at least not so as to be often at their Tables; for this in time will also make you cheap; and there are those who instead of feeding you handsomely, will be apt to place your Visits to the Account of their Civilities, and treat you rather as their *Friend* than *Physician*. Be affable with them and sociable as you will, but cautious how you dip your Finger in their Dish, or take a Bottle at their Cost.

And as for your general Conversation, take this Hint, that you never openly espouse the Interest of a *set Party* in their *Maxims about Government*: Or shew a forwardness to be distinguish'd that Way. *Fear God, and Ho-*

nour the King, but take care of yourself, as well as of the Sick, with whom you are entrusted, and meddle not in *Party Quarrels* or Disputes.

I have liv'd to see both Sorts take their Turns, and tho' their Pretences have run high for *Patriotism* and *publick Good*, yet too many of either Side have fallen short, and made all to center (when they have got footing) in their own, and their Favourite's *private Advantage*. So that I now distinguish my Fellow-Citizens only as *honest*, or *designing* Men; regarding the former, as I am sure you will do, and avoiding the last, however in such wise, as may give the least Offence.

Above all Things, dear Sir, you ought not to be afraid, nor yet asham'd of your *religious Principles*, however you keep those of *Politicks* to yourself. It can be no Disgrace I am sure, (tho' how great a Height of Impiety soever our present Age is arriv'd) for a Physician, who owns himself at all Times no more than *Nature's Minister*, to acknowledge himself also the Servant of *Nature's Master*. But I fear (as I have before taken Notice) we have *gatur'd* it so long, some of us, as to think

even this *Nature* means no other than an *abſolute Fatality*, where *Laws* are ſo irreverſibly eſtabliſh'd, that the Supreme Power, or *Law-giver* himſelf, has now no Power left, either to abrogate or ſuſpend them; but that all is hurried on by a blind Impulſe, *(becauſe the Sentence is not immediately put in Execution againſt the Impious)* like that of the Heathen *Deſtiny*, ever to continue as Things ſtand at preſent; or the Principles being worn out, and dropping to Pieces, the World of Matter is to fall into its primitive *Chaos*, and the *World of Life* to a State of *Annihilation*.

So far as we can judge by the Practice of ſome, they muſt ſet out upon ſuch like Foundation, elſe how can we imagine they ſhould enter the Chambers of the Sick, with a D—n it, what a Pulſe is here? Z—s what a Urine? or with Grimace break ſome ſorry Jeſt at the Bedſide, as I have been Witneſs of? But ſuch Mens Converſation you muſt ſhun as the Plague, for fear of Infection. Nor need you apprehend that any one of Candour and Ingenuity will think you leſs qualified for your Profeſſion, on Account of your *Morality*, or ſober Deportment; leſs learned for not being

Atheiſtical in your Diſcourſe: leſs judicious, for your Diligence and Circumſpection in the Diſcharge of your Duty to the diſtreſſed; or, in a Word, leſs accompliſh'd, becauſe you want only the Qualifications of a *Rake* or a *Buffoon*: So far from it that I am ſatisfied you will be had in greater Eſteem, even by thoſe Men themſelves, who, vicious as they are, cannot be ignorant, that if the reſt of the World were to run upon their *Bias*, neither their own Lives nor Fortunes could be long ſecur'd to them: And now give me leave to conclude with the following Qualifications I judge neceſſary for him that is entering upon this noble Profeſſion, or who deſerves

The Character of a good Phyſician.

First, I think he ought to be a Perſon of ſolid *Erudition*, and a *ſound Judgment*, (if to this a *Genius* for Phyſick, or a natural Talent that Way could be purchas'd, much Pains and Labour might be ſpar'd) expert in *Anatomy*, and frequent in the Diſſection of *morbid Bodies*, as alſo well read in the *Hiſtory of their Diſeaſes*, careful in making his *Obſervations* there-

on, or diligent in remarking ſuch as may be of after uſe to him.

Secondly, He muſt be a Perſon of ſtrict *Probity* and *Fidelity*, Maſter of the beſt *Morals*, by no Means babling in private, much leſs in his publick Converſation, the Weakneſſes or Infirmities of either Sex, which have been communicated to him, or about which he has been conſulted: For as *Helvetius* has rightly remark'd, a thorow Experience in the Knowledge and Cure of Diſeaſes, with a large Stock of *Prudence* and *Probity*, will furniſh ſuch a Phyſician as may be able to diſcharge with a good Conſcience the Duties requir'd of him. Upon which Account it is that I would have him to be

Thirdly, A Perſon of the greateſt *Honour*, as well as *Gravity* and *Modeſty*.

Fourthly, He ſhould be *Courteous* to all, yet know how to keep that becoming Diſtance with his Patient, as may procure to him the greater Reverence and Reſpect.

Fifthly, He ought not to be *Loquacious* or a *Tatler*, for which none but an *old Nurſe* will value him; neither affect a ſupercilious Air or *cynical Moroſeneſs*, which will produce to him

the Character of a *proud* Man, and render him contemptible upon that Account, if on no other.

Sixthly, It will behove him to appear always neat in his *Attire*, avoiding the Extremes of the *Fop* and the *Sloven*, with a chearful Countenance, eſpecially before the Sick; rather compaſſionating their Infirmities, than reſenting every little Excurſion which Pain and Peeviſhneſs may extort from ſome of them; for as *Pity* and *Humanity* are due to all Men under Affliction, ſo no Man ſhews theſe moſt excellent Endowments with a better Grace than does the Phyſician.

Theſe chiefly for the Sake of his *Patient*, whilſt for his *own*, it were much to be wiſh'd,

Seventhly and Laſtly, That he have ſuch *competent Eſtate*, as may ſupport a handſome Figure in Life, till Buſineſs anſwers, or that he comes to be taken Notice of in the World; and this I think ſtill more deſireable, that he may not fall under any Temptation to do a mean Action, by which Diſhonour might redound to the *Dignity* of his Profeſſion, as well as to himſelf.

Now

Now as your Title, Sir, to the greateſt Part of theſe neceſſary Qualifications for the Office of a Phyſician, are known to thoſe who are happy in your Acquaintance; ſo if by any Thing I have here communicated, a farther Step ſhould be made, towards the putting you into the full Poſſeſſion of what remains yet wanting, I ſhall think the Time I have ſpent therein very well employ'd, and the Recompence ſufficient, that in the Number of your *Friends* you place,

Dear Doctor,

Your very Humble Servant,

D. T.

Ex Muſæo, Die ultimo ejuſdem Menſis, viz. Martii 1678.

POSTSCRIPT.

A Short Account of the *Pulse* and *Urine*, as affording Signs both *Diagnostick* and *Prognostick*; as also of *Crises*, and *critical Days* in *Fevers*, by the Way of *Postscript*.

I Have taken Notice in both my preceding Letters, that as the *Pulse* does often guide us to the Nature of the *Fever*, and the Condition of the vital Energy, so also to the *Regimen* necessary to be observ'd therein; and that the *Urine*, however fallacious at some Times, is yet to be inspected from Day to Day, as affording us often the Signs of *Concoction* of the febrile Matter, by its *Nubes* at the Top, the *Enecræma* suspended, and the *Hypostasis* at the Bottom; besides which, when tending to an *Intermittent*, the same is discoverable by the *lateritious* Sediment.

But

But to give ſome farther Information of both theſe, I here preſent you with a ſhort Abſtract, ſketch'd out to my Hand, by *Zypæus* from his *Inſtitutions*, a Book now ſcarce, yet upon ſeveral other Accounts deſerving your Peruſal, as the beſt, in my Opinion, of the Kind, that has been yet publiſh'd, with ſome Annotations of my own.

And Firſt of the Pulſe.

Which according to this Gentleman is deceitful and mutable, as well from any ſudden Motion of the Mind, as of the Body: So that the Phyſician coming into the ſick Man's Chamber, is not preſently to explore the ſame, which may vary even by the Surprize, or Thought how his Caſe may appear to him.

There are many Differences thereof, ſome of leſs Uſe or Regard: The moſt material, are the four following: The *Great* and the *Small*, the *Strong* and the *Weak*; the *Equal* or *Unequal*, the *Frequent* and *Rare*.

To the firſt of theſe belong the *full* and the *empty*, alſo, in ſome Reſpects, the *hard* and the *ſoft*; the Difference between the *Pulſus*

magnus

magnus ac validus, is by our Author diſtinguiſh'd thus: *Pulſus magnus eſt, in quo Arteria multum pulſat in longum, latum & profundum. Validus, in quo valide ferit tangentia Digitum.*

The *Ordinate* and *Inordinate*, or the *Equal* and *Unequal*, is the ſame as the *Intermitting*: That is, when after a certain Number of Vibrations or Strokes againſt the Finger, there is a full Stop or Interruption for a ſhort Space; and this is again divided into the *æqualiter inæqualis*, and the *inæqualiter inæqualis*; the former is when the Stop happens conſtantly after the ſame Number of Beats, as at 5, at 6, or at 7; the latter, when it falls out ſometimes at 3, and at others at 9, and ſo on, irregular ſtill and uncertain.

To the *Inordinate* others (but I think improperly) add the *Capriſans*, *Myurus*, and *Formicans*. Some likewiſe make a Difference between the *Pulſus celer*, and the *Pulſus frequens*, as betwixt the *tardus* and the *rarus*; alledging that a Pulſe may be *ſwift*, yet not *frequent*; alſo *frequent*, yet not *ſwift*; as the Coats of the Artery happen to be more or leſs dilatable, and require a longer or a ſhorter

Time in their ſtriking the Finger: For as in that which is more dilated, the Pulſe may be *ſwift*, yet taking up Time to communicate its Motion thro' the ſame, leſs *frequent*: So when the Veſſel is more contracted, requiring leſs Space, it may be *frequent*, yet not *ſwift*.

According to a late Writer in the *mathematical* Way,* there is alſo a very remarkable one, betwixt a *large* and a *full*, and a *thin* or a *ſmall* Pulſe; either of which may be *ſtrong* or *weak*, and by reciprocal Proportion, ſo balance each other, as to retain the ſame Magnitude or Quantity of the Stroke in both: that is, the Velocity of the Blood under a *large*, *full* and *weak* Pulſe, may be the ſame as under a *ſmall*, but ſtrong and *ſmart* one; which depends much on the *contractile Power of the Veſſels, the State of the Blood, more or leſs prone to Rarefaction and Condenſation; its Fluxility or Viſcidity, its Heat and ſpecifick Gravity*, which being too weak or ſtrong for the reſtitutive Power of the Nerves, the *Equilibrium* is deſtroy'd, and *Fevers*, as well as other Diſorders, hereby produc'd; but paſſing theſe, as over nice and leſs uſeful Diſtinctions.

* Morgan in his Philoſophical Principles.

To the *hard* and *ſoft* Pulſe belongs the *full* and the *empty*; the former incident to old Age, from the indurated Condition of the arterial Coat, which in ſome have been found Cartilaginous. Related to this, is reckon'd the *Serratus*, though ſurely leſs properly, which with the acute *Pain on the Side*, and the *dry Cough*, are accounted the uſual *Diagnoſticks* of the *Pleuriſy*; with the *hard* and the *ſoft*, are number'd alſo the *ſtrong* and the *weak*, as above remark'd.

Furthermore, in reſpect to the *Pulſe*, Conſideration muſt be had to the *natural Temperament* or Conſtitution of the Body, as likewiſe to the *Age* and *Sex*, the *Paſſions* of *Anger*, *Joy*, *Sadneſs*, *Love*; alſo the *Seaſons* of the *Year*, as *Winter*, *Summer*, *Spring*, and *Autumn*; the Temper of the *Air*, as *hot*, *cold*, *moiſt*, and *dry*; all which have an Influence upon the Motion of the Blood, and of Conſequence muſt differently diſpoſe the *Pulſe*.

Thus to give you a ſhort Recital, to the *hot* Temper naturally appertains the *pulſus validus ac frequens*; to the *cold* the contrary, *parvus, tardus ac debilis*; to the *dry*, *durinſculus & rarus*; but if withal *hot*, the *magnus*; to

the *humid* or *moiſt*, the *mollis & rarus*, *aliquantulum quoque magnus*.

If we regard the *Age*, *Children* have the *pulſus creber & molliuſculus*; *Youth* and *Men* grown, the *maximus ac validiſſimus*; *Women*, the *creber*, *molliſque*, *ſubinde magnus (ut virginibus) ſed ſæpius parvus*; *old Age* the *rarus*, *debilis*, *ſed ſiccus & duriuſculus*.

In reſpect to the *Seaſons*, to the *Spring* is reckon'd the *magnus*, *validus & moderate creber*. To *Summer*, *creber*, *nonnihil magnus*, *validuſque*, in as much as the Blood at this Time is hotter, and more rarified. To *Autumn*, *Pulſus inconſtans & debilis*, by leſſening of the ſaid Heat, together with the frequent Change of Air, from one Side to the other. To the *Winter*, the *Pulſus parvus*, *debilior & rarior*. In *Sleep*, the Pulſe is more *languid* and *rare*, as alſo leſſer than when awake; And now laſtly, if we look to the *Paſſions*, in *Anger*, the ſame is *great*, *ſtrong* and *frequent*; in *Sadneſs* contrarily, *ſmall*, *weak* and *rare*; in *Joy*, moderately *large*, *ſtrong*, and withal *equal*. The Pulſe proper to Perſons in *Love*, is difficultly diſtinguiſh'd, as depending much on the different Paſſions, with which, at divers Times,

theſe People are affected, as *Joy*, *Fear*, *Sorrow*, by which the ſame is render'd almoſt perpetually *unequal*, *fluctuating* or *inconſtant*.

Of the Urine.

As the Diſeaſes of every Part (in the Words of the ſame Author) are not found out by the *Urine*, ſo neither (which the *Pis-Prophet* pretends) is every Diſeaſe that afflicts the Body of Man. And truly the chief *Indications* we can gather hence, are ſuch which relate principally to the ſound or diſeaſed State of thoſe thro' which the *Serum* of the Blood tranſmigrates, whence it derives its Generation and Perfection, or wherein it happens to acquire ſome ſingular Affection of the *Bowels* inſervient to *Concoction*; but in more eſpecial Manner, the *Kidneys*, *Ureters* and *Bladder*; and hence, in ſome Reſpects, it may be accounted a more general *Diagnoſtick* than is the *Pulſe*: In as much as the former, not only diſcovers to us the Diſeaſe, but the Cauſe alſo, and the Part affected, which the laſt does not.

Thus from the *Urine*, in reference to the *Diſeaſe*, we find out *Wounds*, *Ulcers*, *Obſtruc-*

tions, with the *Intemperies* of ſome of the inward Parts; in regard to the *Cauſe*, ſome *viſcid* and *crude Matter* redundant, *obſtructed Bile*, *calculous Concretions*, and *Grumes of Blood*. And laſtly, as to the *Part affected*, we infer the *Bladder* to be ulcerated, by the *branny Scales* and *ſtinking Matter*, diſcharg'd together with the *Urine*. That the *Kidneys* are miſaffected, by the *Caruncles*, *Blood* and *Matter*, however leſs fœtid than that from the *Bladder*: Yet uſually in larger Quantity, which, together with the Pain about the Region of the Loins, puts the Matter out of Diſpute. In *Fevers*, we apprehend the Head, if not as yet, likely to be affected ſuddenly, by the Change of the *Urine* from a deeper Colour to a crude Paleneſs. Thus the *Critican* has juſtly remark'd, that if in a *Fever*, *Concoction* appears in the *Urine*, and after turns pale, without a Sediment, provided the ſame ceaſe, all goes well, otherwiſe ſome fatal *Metaſtaſis* (ſuch as a Tranſlation of the morbid Matter to the Head, or being thrown upon the Nerves, bringing on Convulſion) is at hand: And hence he ſays, tho' a *concocted Urine* does not always accompany a *critical* Evacuation or

Erup-

Eruption, yet ſhould it always precede one. None of which are found out by the *Pulſe*, which nevertheleſs, it muſt be granted, is the more ſure *Prognoſticator* of Life and Death, by indicating the *vital Principle* to be more ſtrong or weak, as the Diſpence of the *nervous Fluid*, in the Brain its Storehouſe, is more vigorouſly or faintly ſupplied for carrying on the Circulation of the Blood, without which, any more than Breathing, we cannot live.

The *Urine* we own does ſometimes preſage Death, in reſpect to its entire Stoppage, as in the *Iſchury* many Days continu'd: In the *Aſcites* or Dropſy of the Belly, from its ſmall Quantity and lixivial Contents, a Diſeaſe almoſt as fatal; by the fœtid Matter iſſuing therewith, accompanied with great Pain in the Diſcharge, as in the *Ulcers* of the *Bladder* already obſerv'd, uſually mortal alſo at long run: However we are not otherwiſe to practiſe *Uromancy*, from Inſpection ſimply of this Fluid, which is ſo very precarious in *Fevers*, that we find many Perſons dying with a laudable *Urine*, of which Danger the *Pulſe* gives the truer Notice.

If we look upon the Colour of this Liquor, we obſerve the ſame diverſe, accordingly as it is more or leſs ſaturated with ſaline and earthy Particles, importing differently alſo: Thus the inſipid made in large Quantity, which is clear like Rock Water, to which they compare it, is common to the *Hyſterick* and *Hypochondriacal Affections*. The *ſweetiſh* like hony'd Water, and pale, or rather *Cowſlip* colour'd, coming down as it were like a *Cataract* or Flood, withal ponderous as the *Lympha*, denotes the *Diabetick Profluvium* or *Piſſing Evil*. On the contrary, the high colour'd and lixivial, as but now obſerv'd, made alſo in little Quantity, the *Dropſy* of the Belly. An inflammatory Diſpoſition of the Parts within, ſuch as that of the *Inteſtines*, but eſpecially the *Liver* and *Kidneys*, will diſpoſe the ſame to be Coffee colour'd, or of a deep red; as the Obſtruction of the *Bile*, will render the ſame yellow, witneſs the *Jaundice*. A wheyiſh Water is common to Children labouring under the *Stone* in the *Bladder*, the like I have known accompany the *Worms*, as alſo to precede the *Small Pox*, in Infants.

But

But as to the Colour and Scent alſo, many Things may contribute inwardly taken: Thus *Saffron* and *Madder*, as likewiſe *Turmerick*, but eſpecially *Rhubarb*, will ſtrike a Dye thereon of the ſame Colour; *Aſparagus* and *rotten Cheeſe*, *Garlick* and the *Turpentines* of all Sorts, will imbue the ſame with differing Smells; the three firſt offenſive ones, but the laſt more grateful.

What is moſt obſervable in relation to the *Conſiſtence*, are the *clear* and *turbid*; of the former already, the laſt is often the forerunner of the three more remarkable *Contents*, to be here obſerv'd; 1. The *Nubecula* or Cloud, ſwimming at the Top. 2. *Eneoræma*, which is the ſame growing more weighty, and falling lower, or hanging as it were in the Middle. The third call'd *Hypoſtaſis*, or *Sedimentum*, growing ſtill heavier, and ſinking to the Bottom; or taking with you a little *Algebra*, or a touch of the *Mathematicks*, you muſt underſtand, that Bodies *gravitate* with their Exceſs of *Gravity*, above the lighter: So that ſuppoſe $x+y$ to be the heavier, and x to denote the lighter, then $x+y=y$. All theſe

with ſome ramous Particles holding them together, are compounded of the nutritious Corpuſcles, carry'd along with the *Serum*, and waſh'd off from the Blood in its Paſſage, according to their ſeveral Gravities as now hinted, taking their Stations in the *Urinal*, the lighteſt keeping on the Surface, the heavier ſlipping down lower, and the weightieſt ſinking to the Bottom thereof; which ought to be of a *vibatiſh Colour*, *ſmooth* and *equal*, or, according to *Bellini*, *figuræ retuſæ Pyramidis, cum baſi in fundo vaſis*, the beſt Indication of a kindly and regular Concoction: And hence ſome Phyſick Writers have remark'd in Fevers, that when towards the fifth, ſixth, or ſeventh Day, this light and even Sediment ſhews itſelf in the *Urine*, it is a good Argument of Digeſtion of the Matter thereof, and a promiſing Index of Recovery, particularly when the Day before there was no ſuch Appearance, and that the ſame is not divuls'd, but cloſe, even, and compact together. Again if on the third Day, the *Nubes* or *Enevræma* ſhew themſelves, all is to go well, eſpecially when the ſame begins to gather cloſer, and has a Tendency downwards, like the true *Hypoſtaſis*.

We

We have already view'd the other Appearances and Contents in this Fluid, the *Urine*, beſides which there is one ſupernatant in the place of the Cloud at the Top, of which we have not taken Notice, that is an *oily* or *fat Appearance*, frequently accompanying the *hectical* or conſumptive Patient, though I have known it common to others, proceeding from the melting down of certain *ſulphureous* Parts in the Blood, by a preternatural Heat ſtirred up; which paſſing off alſo with the *Serum*, thro' the *Papillæ* and *renal Ducts*, from their lightneſs in Compariſon of the others, appear like a Skin or Scum upon the uppermoſt Part thereof.

Of Criſes, *and the* Dies Critici *in* Fevers.

Altho' it is granted that ſome Fevers may be *endemical* to ſome particular Countries, and that different *Epidemicks* alſo do ariſe from ſome hidden Cauſes, whether *planetary* above, or *ſubterraneous* beneath us; yet the *common putrid Fever*, (improperly ſo call'd, at leaſt in

my Opinion) which is owing rather to the manifeſt Qualities in the Air, or a Treſpaſs in the *Nonnaturals*, muſt be allow'd, I think, of near Affinity in all Places and Climates; ſo that as our learned Countryman Dr. *Freind* in his *Ninth Commentary* takes Notice, notwithſtanding the Air of *Thaſos*, where *Hippocrates* practis'd, by its Situation, and particular Diſpoſition, varied from that of *England*, yet there was not the leaſt Difference of their *Fevers*, from theſe of ours, contrary to what ſome among us are ready to imagine, and indeed thoſe very *Fevers*, which Dr. *Sydenham* has digeſted into eight ſeveral *Species* or *Conſtitutions*, were rather (according to this Gentleman) different in their *Degree*, and ſome different Appearances, than in the diverſe Genus thereof: For as there never was any ſuch where the Sick were in every Particular ſeiz'd alike; ſo the diverſe Symptoms at ſome times, in one from another, are not ſufficient for eſtabliſhing a new *Genus*, eſpecially where, excepting a Regard to thoſe peculiar Symptoms above mention'd, the general Indications are much alike: So needleſs, or unneceſſary is it, ſaith our Author, to be over-curious in theſe

Diſtinctions,

Diſtinctions, which are ſo little inſtructive to the young Phyſician, that they may poſſibly lead him into ſome Miſtake, as falſly ſuggeſting when he ſees any ſingular Note or Property affixed to the Diſeaſe, he is alſo to find out ſome peculiar Method of Preſcription ſuitable to the ſame; of which Notice ought to be taken, leſt it ſhould be ſuppoſed all that has been deliver'd concerning *Fevers*, by the divine *Hippocrates*, ſhould be thought foreign to us, or belonging only to a *Set* of Men, born under another Region, or living in a remote Country from us, ſo that whether or no the *Corollaries* which may be hence deduc'd, for ſetting on foot the ſame Cure among us, will hold good in all other Parts of the World, I am not to diſpute, nor is it material; this I may ſurely affirm among our own *Epidemicks* of the ſame Kind, where fifty are ſeiz'd about the ſame Time, we ſcarce meet with five in every particular Complaint alike; for as Men's various Conſtitutions and Ways of living, diſpoſe the Humours in their Blood, to be diverſly affected, even under the ſame *Conſtitution* of the *Atmoſphere*, or whatever ſecret Cauſe ſhall give Riſe to the reigning Diſeaſe;

ſo

ſo it is leſs Wonder the Appearances of ſome Symptoms ſhould be diverſify'd. But notwithſtanding all this, however the *primary* or *depurator y* Fever, (as *Sydenham* calls it) that is, the *Inflammatory*, ſuch as the *Angina*, *Pleuriſy*, *Peripneumony*, &c. ariſing from the Reſpiration intercepted, or from the manifold Qualities of them, together with the *Small Pox* and *Meaſles*, may be the ſame in all Countries and Regions: yet this cannot be ſaid of the nervous or malign Eruptives, proceeding from ſome more ſubtile and ſecret Properties, exhaling from certain *noxious Minera*, in the Bowels of the Earth, which being differently impregnated in diverſe Countries, or under different Climates, may ſend forth Steams productive of diverſe Maladies peculiar to thoſe Bodies within their Reach, and which are Strangers to the Inhabitants of diſtant Regions. Nor does *Sydenham* make the Alteration of our own *Conſtitutionary Fevers* ſo trivial, as here repreſented, by telling us only, (as our learned *Commentator* upon *Hippocrates* obſerves) *That the continual Fevers were ſo widely different, that the ſame Method which relieved the Patient at the Beginning of the Year,*

towards

towards the End of it might possibly carry him off. He goes farther, surely, when he acknowledges the Method which had answer'd in a preceding Constitution, was hurtful in the following: Thus the one would bear both repeated Bleeding and repeated Blistering, if not Purging, whilst that of another Constitution would suffer neither, but requir'd a different Treatment, being rather determin'd by its natural Genius, to some other Evacuation, as that particularly of Perspiration. For this Cause, saith he, I was always forc'd to pause a-while, whenever any new *Species* arose, and wait for proper *Indications*, that I might discover the true Genus of the Fever, and which way Nature tended of her own Accord: which having found, I could then as readily, and as successfully also, set about the Cure of this new Fever, as I had of the rest.

This only by the way premis'd, I come now to speak a few Words of the *Crisis* and the *critical Days*, whereon the Antients laid very great Stress, but which, in a Manner, is wholly neglected by us, who observe that *Fevers* of all Kinds run their Stages, without any Regard to Numbers of Days, unless that they

do

do not often extend beyond twenty-one; I ſay, not often, for we want not Inſtances of ſuch as have exceeded thirty-one: But as to the finiſhing their *Deſpumation*, or what is call'd *Concoction*, preciſely on ſuch a Day, as the 5, 7, 11, 14, or 21, there is, I ſay, no Rule that holds with us, who obſerve, as the Sick is ſeiz'd at all Times and Seaſons, ſo dies he, or ſhews Signs of Recovery, on the Days intermediate, or between all theſe; and hence we juſtly, I think, have ſet at naught the *Dies Indices, indicantes ſeu contemplabiles*, ſuch as the 4, 11, 17, and 24; the *Intercidentes*, call'd otherwiſe *Intercalares*, which were the 3, 5, 9, the 13 and 19; the *Vacui*, *viz.* 6, 8, 10, 12, 16, 18; and which others have run up to 39, whilſt our People make them all *Medicinales*, and in that reſpect *pleni*, whether for the better at all Times, or not the worſe at ſome, I ſhall leave the Faculty to determine; but doubtleſs it may furniſh out ſome Reaſon, why theſe *Criſes* are leſs certain with us than they were among the Antients; for Nature, as *Baglivi* obſerves, being the beſt Curer of Diſeaſes, the Phyſician is to ſtand by, not as an idle Spectator, but to aſſiſt as he ſees

Occaſion,

Occaſion, or as the Symptoms happen to indicate: And this was the Method of *Hippocrates*, who gave few Medicines at the Beginning, and at the Height none at all, provided the Fever was not attended with any perverſe or malign Symptom, requiring ſomething farther to be done.

By this the Diſeaſe came to its natural *Criſis* or Termination, at the uſual and ſtated Period appointed by Nature, which, perhaps, may be inverted and render'd confus'd, where over-officious *Art* intrudes and puts by the ſame.

'You can't imagine (ſaith this conſiderate 'Man) what Pleaſure I have had, after the 'Purſuit of this Method, and ſeeing the fe'brile Fits ſucceed by gentle and friendly 'Turns, running their Rounds in the ap'pointed Order of Nature; In ſeeing, I ſay, 'the regular and finiſh'd Courſe, the *Criſes* or 'Depuration of each Fit, as well as the ge'neral Deſpumation at the End of the Diſ'eaſe.

'On the other hand, when ſhe was teaz'd 'and thwarted with the continual Uſe of Re'medies, (thoſe too perhaps ill ſuited, as well 'as timed) I always obſerv'd *(væ vobis Me-*

'*dicts!* (ſhall I ſay now?) that every Thing 'grew worſe, and I can ſafely ſay, that I have 'oftentimes cur'd *inflammatory Fevers*, eſpe-'cially thoſe accompanying the *Small Pox*, 'by *Bleeding*, a *thin Diet*, and *diluting Re-'medies*; and purſuing this Method, never 'had a Patient died under my Hands.'

Oh happy *Baglivi!* or ſurely theſe Fevers at *Rome* have been more mild and kindly than ours at *London*, where, tho' I own, among the poorer Sort, who have purſu'd the ſimple *cooling Regimen* of thin Gruels prepar'd either with Oatmeal or Barley, I have obſerv'd ſome-times the like Succeſs, yet not at all times. To the like Effect.

'Being call'd, ſaith our Countryman *Sy-'denham*, to a poor Body in theſe Fevers, 'unable to bear the Charge of many Medi-'cines; I did nothing after Bleeding and 'Purgings were over, (where theſe were in-'dicated) but order them to keep their Beds 'all the Time of their Sickneſs, *(tho' here he 'runs counter to his own general Advice in 'other Places)* and to drink Oatmeal and 'Barley Broths, and the like; not denying 'them moderately to quench their Thirſt

'with Small Beer: with a Glyſter of Milk
'and Sugar every or each other Day, to the
'10th or 11th; and towards the End of the
'Fever, Seperation being began, if the ſame
'was ſlow, I allow'd now and then a little
'ſtronger Drink, inſtead of a Cordial, and
'ſo without more ado (except a Purge at the
'Cloſe of the Diſeaſe) I cur'd them.'

However among thoſe, whether Rich or Poor, afflicted with Fevers of the ſame Kind as to the Symptoms, I ſcarce ever could fix the *Criſis* exactly to the ſame ſtated Time, or thought it reaſonable to expect it: For altho' *vegetable Juices* from the ſame Plants, and of the ſame Growth and Maturity, put into Veſſels, and ſet to ferment under the ſame Degree of Heat and Cold, may happen to fine or be deſpum'd, the Effervеſcence ceaſing at their limited Time or Period; yet will not, nor can it be ſuppos'd the Blood of divers Men, living differently, and of divers Temperaments, ſhould be ſubjected to the ſame ſtated Number of Days, under its *Ebullition* or *Fermentation*.

Thus *Lemnius*, diſcourſing of the *Concoction* of the feveriſh Matter, acquaints us, *That if any Sign thereof appear'd on the fourth Day, about*

about Greece *and* Italy, *the Diſeaſe was judged, that is, terminated on the ſeventh, but with us, ſaith he,* (Gueldria Batavica) *upon the ninth; and in the continual Fever remitting, and ſo intermitting, as having one Day better than another, the ſame will not conclude before the eleventh: But notwithſtanding this Difference of Appearance one Day from the other, altho' the Force of the Diſeaſe ſeemeth to be overcome, at the Time of ſuch Remiſſion or Intermiſſion either, yet if there ariſe any ill Symptom between, it may not poſſibly be judg'd till the fourteenth, the common Boundary of theſe acute Diſeaſes, altho' it may happen they may extend to* 20, 30, *or* 40.

From all which I think it appears plain, how little Certainty there is in thoſe Days, which are call'd *Critical*; and that altho' the Blood of one, under this State of a feveriſh Ebullition, may ceaſe its *Luctus*, and regain its Temper by the ſeventh Day, yet that of another, under the like *Effervescence*, may not recover its priſtine Calm till the eleventh or the fourteenth, the Signs of whoſe Approach are aptly enough drawn up by an Author we have formerly quoted upon ſome other Occaſions, *viz.* A *ſenſible Diminution of the Heat*

and

and Burning, with an agreeable Moiſture, as well on the Tongue as the Skin in general, ſucceeding in its Place, the Urine changing from the more to the leſs inflammatory Colour, or from that of crude to a concocted State, as is ſeen by its light and equal Sediment; eaſy, gentle Sweats, kindly Evacuation alſo by Stool, as in the Time of Health; the Pulſe regular, imitating almoſt the Natural; and laſtly, if the Fever aſſumes that Shape, periodical Intermiſſions, at leaſt regular Remiſſions, where before the ſame was continual, irregular, and had imperfect or indiſtinct Intervals.

And this is what I have thought neceſſary to communicate farther about the State of Fevers in general, and the Time of what they call the *Criſis*, when the utmoſt Care is requir'd, that inſtead of forwarding we do not ſomeway retard or pervert the ſame, or change what might have prov'd *ſalutary* into a *fatal* one; in regard to which I cannot better ſhut up this Diſcourſe, than in theſe Words of the ſame excellent Author *Lommius*.

Omnibus, ita uti præcepi, diligenter per Febris Principium & Incrementum, proviſis: ubi ad Statum ventum eſt, videre imprimis oportet,

quibus Natura viis, corruptum humorem pellere instituat: Eamque convenit parum firmam juvare, neque vero reclamat, quod Hippocrates scribit quæ judicantur aut judicata sunt integre, ea nullis Medicamentis aliisve irritationibus lacessenda, sed sinenda esse: (Scil.) hic non lacessimus, sed quo Natura vergit, eo leniter impellimus, laborantique Naturæ, tanquam Manus auxiliatrices damus, rebus usi Moderatioribus, nec quicquam Naturæ opus, more purgantium medicamentorum turbantibus; ut enim Naturam recte omnia per se absolventem attingere, necesse non est: ita fas est laborantem Conatuque vacuantem difficiliore, adjutare, &c.

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